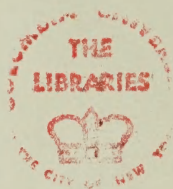


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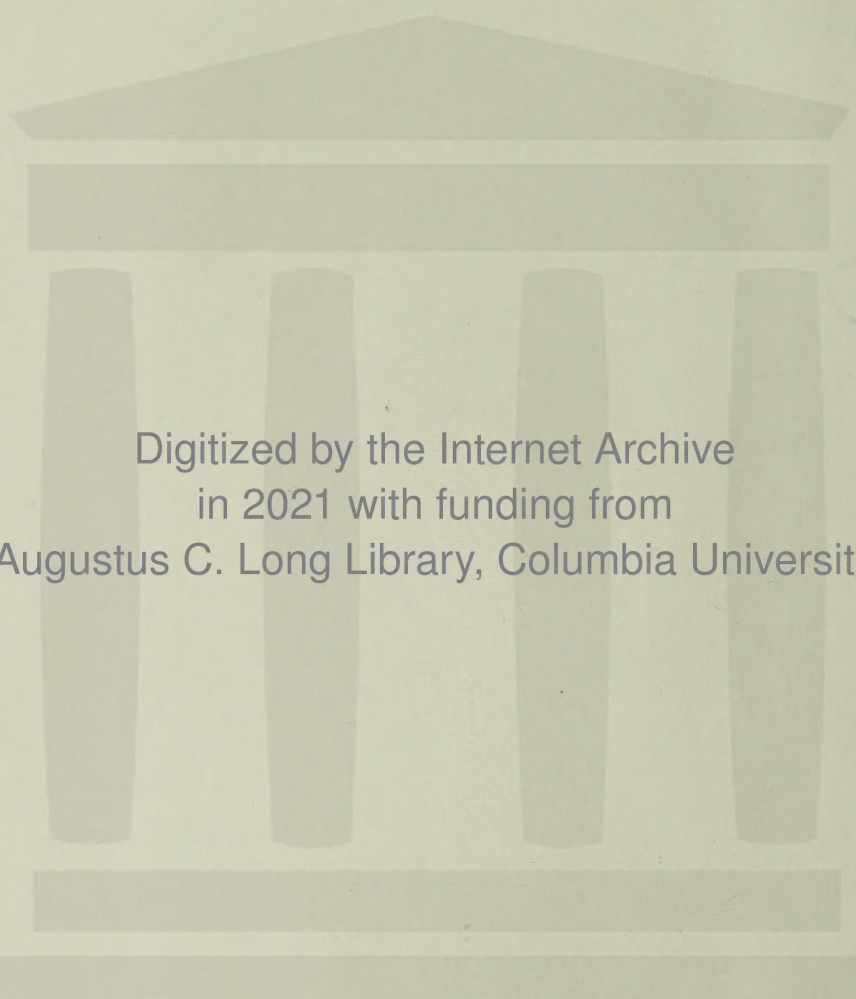


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# Stethoscope

NURSING  
PREPARES TO  
MEET NEW  
CHALLENGES

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# Stethoscope

VOLUME XLI, NO. 1  
WINTER 1986

A publication of  
The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
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Published by  
Public Interest Department  
Richard P. Zucker, Director  
The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
New York, NY 10032-3784  
(212) 305-5911

**About the Cover:** Presbyterian  
Hospital nurses, 1896, and 1986 (left to right:  
Janice Simpson, R.N., pediatric emergency  
room; Josephine Goldberg, R.N., Area B;  
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room; Stephen Zuendel, R.N., Area A; Eileen  
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R.N., Area A.) 1986 photograph: Howard J.  
Radzyner

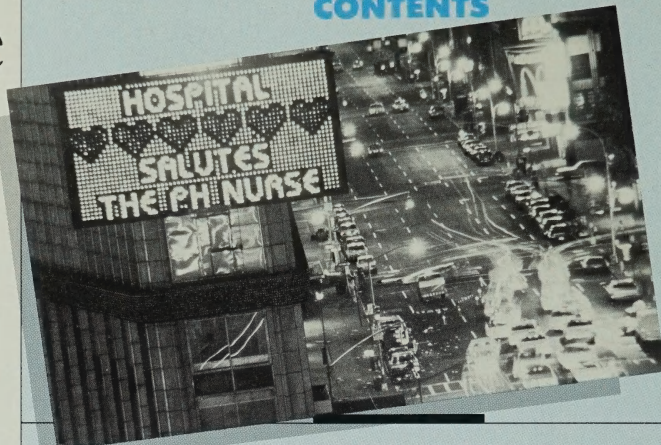
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### We're Becoming More Colorful

With this first issue of 1986, *Stethoscope* enters its fifth decade of publication. And in celebration of our 40th birthday, we've made the magazine more colorful—literally and figuratively.

In addition to having a strikingly handsome new design, *Stethoscope* will become increasingly insightful and issue-oriented. While continuing our coverage of important new developments at the Medical Center, we hope to build upon *Stethoscope's* 40 years of success to create a Hospital magazine that is second to none.

We hope you will continue to enjoy *Stethoscope*, and we welcome your comments and suggestions.

Robin Roy, Editor



nursing and hospital care long have been considered synonymous. Since the earliest days of The Presbyterian Hospital, the title "PH Nurse" has been identified with excellence in nursing care, pride in the profession and leadership in the field of health care.

The concept of excellence in nursing has changed since 1928 when Columbia-Presbyterian Medical Center opened its doors. In recent years nursing has responded to changes influencing all society: the women's movement, the technology explosion and, now, the age of information. A quest for professionalism through higher education and the movement toward collective bargaining have had an impact on nursing at The Presbyterian Hospital as they have throughout the country.

As we look forward to an era of modernization at the Medical Center and advanced technology throughout the field of health care, the Nursing Division at The Presbyterian Hospital is preparing to respond to continued change and challenge.

In nursing, as in any changing discipline, certain characteristic qualities remain the same. The essence of nursing is caring, and it is caring that has attracted many men and women to the profession. But caring, itself, has many meanings.

In the emergency room and intensive care units, its character is high-tech and action-laden. But for the terminally ill, the friendless and the homeless, caring may take the form of whispered assurances that ease the troubled mind, or hands that soothe and bring comfort to the pained body.

This edition of Stethoscope presents a snapshot of Presbyterian Hospital nursing today; the multiplicity of nursing roles and the diversity of practice opportunities in a large academic health center.

Are nurses born or made? Caring is an attribute possessed by many men and women. Yet caring complemented by decisions and actions that are based on expertise and skill is the mark of a special professional—the educated, experienced individual we call the "PH nurse."

# NURSING ONE OF THE MANY

By Susan Bowar-Ferres, R.N., A.D.



STAN SKARDINSKI

**H**er bright blue eyes twinkling through thick bifocals, the woman said, "I'm almost 90 you know...I've walked enough in my life...I've lost my appetite. I've had two or three husbands—isn't it terrible, I can't recall any but the first. I do know I'm in Presbyterian Hospital and it's good for me now."

At first glance, Mrs. G., or Clare as she prefers, seems to be a typical elderly patient on an orthopedic unit, with no exotic technological diagnostics, no special research protocol, and presenting no unusual pathology. Having fractured her hip in a fall at home, she underwent an ORIF (open reduction and internal fixation) in October.

In fact, however, there is no "typical" patient. The "Clares" of the many general patient care units at Presbyterian present myriad unique challenges and rewards to the hundreds of nurses who work with them.

### **Returning to Health Presents Physical and Emotional Challenges**

Clare is struggling with the changes of aging; not just with a fractured hip, but also with a fractured life-style. She has been homebound with an 80-year-old sister in a small apartment in Washington Heights, but she will not be able to return there as she will require more care than her sister can provide. It is her nurses' expectation not only to return her to health, but to help her adjust to and meet the challenges she will face when she leaves the hospital.

At the time of her surgery, Clare was incontinent, immobile by choice, thin because of poor eating habits, and a prime candidate for skin breakdown. The shock of her accident and surgery, the new environment of the hospital and the effects of anesthesia had combined to confuse her. On PH 5 East, Clare's nurses' initial and ongoing assessment of her status, and individualized plans for her care helped her regain continence and orientation, and prevented skin breakdown.

Incontinence, a major nursing challenge, was remedied by offering Clare a bedpan or commode regularly and often, every day. While such a solution might appear basic, it nevertheless requires the continuity of care that is the hallmark of the nurse's profession.

Similarly, skin breakdown was prevented by the commitment of Clare's nurses to turning her, changing her po-

sition and keeping her dry. Application of lotion and skin stimulation by massage, as well as multi-vitamins, nutritional supplements and good fluid intake also contributed to her improvement. Although her appetite still is not good, efforts continue to help her eat a little of whatever she likes at frequent intervals. Cookies and tea are offered, and even beer may be added soon—in moderation—because she has a "yen" for it.

Clare's awareness of her surroundings and recognition of the day and time are signs of improved orientation. She can tell the time by the clock on her wall, and every day her nurses take time to talk to her about current events. Nurses and patient, alike, eagerly await the daily telephone call from Clare's sister—an important link to her familiar home environment.

Nursing care obviously is also important to good medical care, and close attention in Clare's case averted a potentially severe medical situation. Assessing a combination of heavy breathing, erratic vital signs, inability to focus and Clare's complaints of not feeling well, prompted one nurse to call in a physician for further evaluation. After a brief stay in the ICU for cardiac arrhythmia, Clare was able to return to 5 East with new medications, claiming it was all "just a fuss."

### **"Just Be Good to Me"**

"I've walked enough in my life...I'll walk when I'm home," express Clare's attitude toward expending energy to move. Her nurses appreciate the 90-year-old woman's desire to stay seated and don't try to force her to walk. Instead, they focus on enhancing the quality of life she prefers. When asked what she really wants at this point in her life, Clare replied, "Well, it has to happen sometime...just for people to be good to me." And, indeed, nursing care has helped her recover from surgery, has prevented major complications, and has helped her maintain her physical and psychological integrity. Is she walking? No. Is she eating well? Well, better than before. She also is comfortable, content and feeling loved. Her stories of being a beautician for "the rich," and of managing her own business bespeak an active life gone by. But the twinkle in her eye, her strong voice and firmly outtheld hand communicate that a vibrant living spirit continues.

Clare's story is a cameo of the patients Presbyterian's professional nurses en-

counter every day and from whom they receive their greatest rewards. The excitement is subtle and changes come slowly, but these nurses' commitment and expertise are the backbone of hospital care, and this care makes a difference for those who experience it in the giving and in the receiving.

### **PATIENT EDUCATION: BRIDGE BETWEEN HOSPITAL AND HOME**

The Registered Nurse often is the member of the health care team who spends the most time with patients and their families. This position in the health care delivery system gives the nurse a unique view of patient and family educational needs. Through education, nurses help patients and families return to or maintain their own ideal level of wellness.

Staff nurses throughout the Hospital are encouraged to prepare educational materials in many forms. The Nursing Patient Education Committee, made up




*A nurse reviews medication with a patient before he leaves the Hospital.*

of representatives of all nursing departments, reviews the materials submitted, and recommends their use with the goal of meeting the health education needs of patients while in the Hospital and after they leave.

In this era of health care cost containment, maintaining wellness by enhancing people's ability to care for themselves properly is essential. Nursing has been and will continue to be in the forefront of patient education efforts at The Presbyterian Hospital.

by: Jeanne Figueira, NCC  
Carole Moleti, NCC  
Kelly Lindgren, ANC

# KEEPING COOL IN NURSING HOT SPOTS

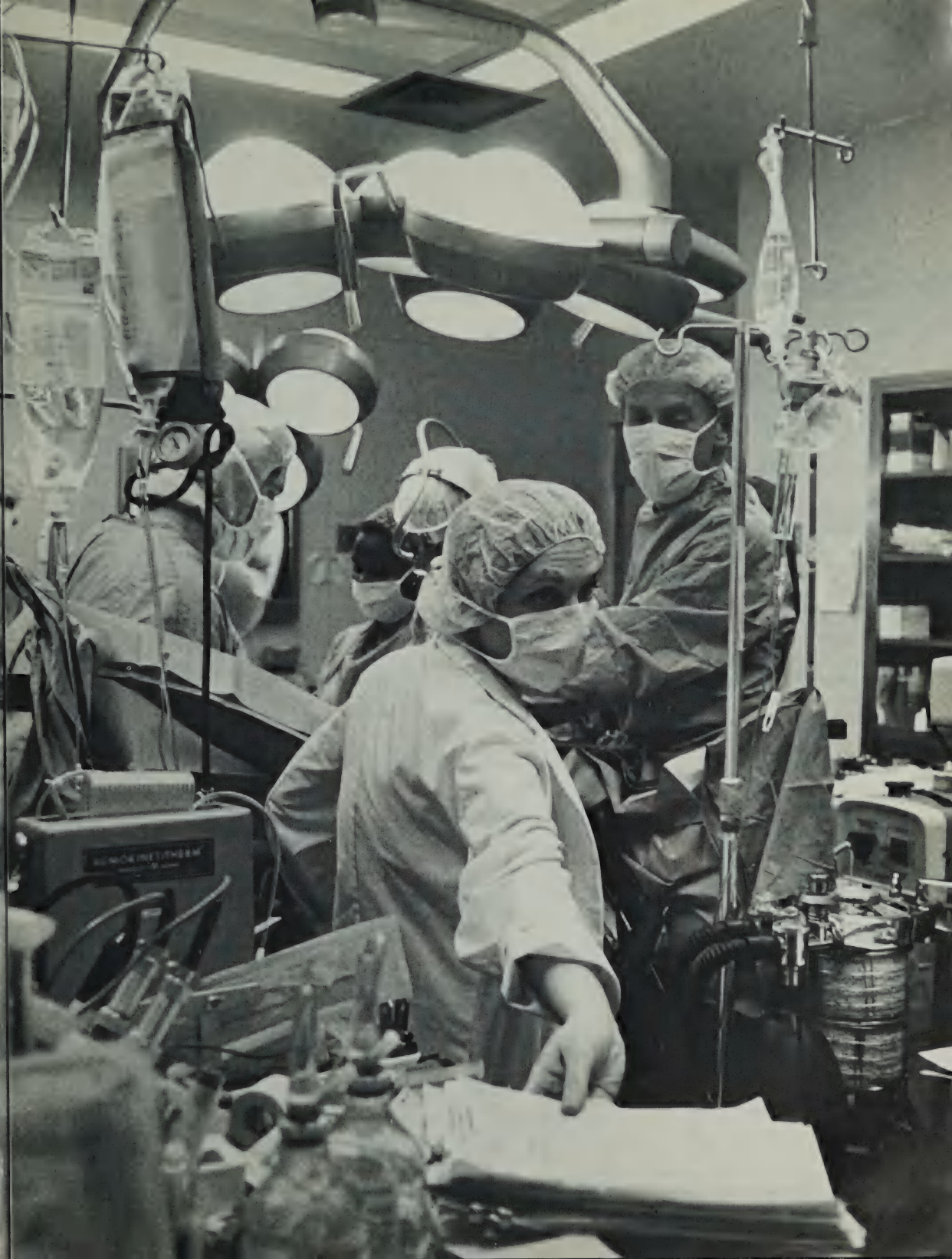


One of the wonders of American medicine is the emergency room, where nurses and doctors literally give people a second chance at life. The pace is swift at a metropolitan hospital like Presbyterian, where the acute-care portion of the ER (Area A) may see as many as 200 patients in a day, including a number of major trauma cases.

As Janice Connolly, nursing care clinician for Area A, says, "For many patients, the emergency room is Presbyterian's front door, and there's no way to anticipate what will come through that door from one moment to the next."

For many trauma patients—victims of car crashes, industrial accidents or gunshot or stab wounds—emergency care often extends to the operating room and to surgical intensive care.

Nursing is the common thread that links these critical areas. A nurse is there at every step, evaluating, treating, monitoring and reassuring the patient.



## First Stop: The Emergency Room

**7:57 p.m.** A phone call from an Emergency Medical Services (EMS) dispatcher alerts an ER nurse that a man with a gunshot wound of the chest will arrive in three minutes. The nurse, Sharon LoPuzzo, evening nurse coordinator, compiles a brief account of his condition and quickly triggers a team of health professionals into action. She notifies the charge nurse and house



*Emergency room nurses assist in cardio-pulmonary resuscitation.*

staff, and instructs a clerk to page a variety of specialists, including the senior surgical resident, anesthesiologist, radiologist and respiratory therapist. Ms. LoPuzzo also requests that security be alerted to ensure a smooth transition from the ambulance to the trauma, or "crash" room.

A second nurse, Kate O'Leary, rushes with a stretcher to meet the patient in the ambulance bay, while her colleague, Maureen McGinty, goes to ready the crash room for the patient. She quickly hangs as many as 10 intravenous (IV) lines, and makes sure that specific supplies and equipment for a chest injury are present.

**8:00 p.m.** In what seems like seconds, the patient arrives in the crash room, where all three nurses converge. There is little spoken communication, and little is required; Ms. LoPuzzo, Ms. O'Leary and Ms. McGinty automatically assume their respective roles, exemplifying the concept of team care.

As the nursing team assembles, an EMS paramedic confers with Ms. McGinty, describing the accident and the patient's latest vital signs.

The paramedics have already garbed the patient in MAST trousers (a pants-like device that maintains blood pressure by putting pressure on the legs), which Ms. O'Leary checks for proper inflation. Ms. McGinty starts a log of all activities in the crash room, which has bays for four separate trauma cases. Sometimes all are filled at once.

Thus begins the so-called "golden hour" of care for a trauma patient, the all-important period in which prompt and expert care is essential for his survival.

The nurses start their assessment of the patient and cut off his clothes. Ms. McGinty takes and records his vital signs—blood pressure (70, by palpation), pulse (140), respiration (32).

Ms. LoPuzzo begins to question the patient (who has remained conscious), obtaining details about his injury and medical history. The questioning also orients the patient to the hospital and gives Ms. LoPuzzo an opportunity to reassure and comfort him, explaining where he is and what is being done for him.

Almost instantaneously, the medical team arrives, asking a variety of questions about the patient's condition. The patient is more closely examined and rolled to his side to check for exit wounds.

For the next few minutes, the nurses assist the physicians as they work to stabilize the patient. The nurses prepare chest trays for emergency surgery; draw up medications to resist infection, to raise blood pressure and to forestall a cardiac arrest; insert an IV line to infuse blood; hook up devices to monitor the heart; prepare equipment to suction the respiratory tract and chest; and set up a defibrillator in case of cardiac arrest.

**8:10 p.m.** The doctors and nurses complete their primary assessment. X-rays are taken in the crash room as the surgeon notifies the OR of the patient and assembles his surgical team.

Ms. McGinty informs the patient that he'll need an operation. By now, an elevator stands ready to bring the patient to the OR on PH 18. The nurses check vital signs almost continuously.

In the ensuing minutes, Ms. LoPuzzo and Ms. McGinty prepare the patient for transport, loading a stretcher with portable equipment and making sure that all lines, tubes and connections are secure. Ms. O'Leary leaves to attend to other patients in Area A.

**8:25 p.m.** Ms. McGinty checks the patient once again and finds he is stable for transport to the OR. His blood

pressure now reads 110/70, pulse 100 and respiration 24. While she and the surgeon accompany the patient to the OR, Ms. LoPuzzo remains in the crash room, readying it for the next trauma case, which could arrive any minute.

Not all trauma patients stabilize so quickly. Sometimes this scene will last hours. Other times patients are so critical that the surgeon will open the chest right in the ER to begin repairs or massage the heart by hand, which he'll continue to do as the patient is wheeled down the hallways of the Hospital and whisked into the waiting elevator.

Whether the preceding scenario consumes minutes or hours, the nurses generally are unaware of the passage of time or the stress of the situation. The adrenaline pumps continuously. Only later does the intensity of the situation catch up with them.

The patient's family arrives and meets with Ms. LoPuzzo, who explains the patient's situation.



*Operating room nurses prepare instruments and equipment for the next surgical case.*

## Next Stop: Operating Room

**8:30 p.m.** As the patient ascends in the elevator, two nurses on the 18th floor, Flora Wang and Jocirna Tenaflorida, quickly organize an operating suite for emergency open heart surgery. Minutes earlier, Ms. Wang was pulled from another operation, with time only to scrub and don a fresh gown and pair of gloves.

During the next five to ten minutes, they open and organize various surgical trays and retrieve appropriate medications. Each surgeon prefers a different arrangement of the surgical tools, which Ms. Wang and Ms. Tenaflorida must

anticipate. When the patient arrives, they help transfer him to the operating table, prepare and drape him for surgery and make relevant assessments. Ms. McGinty (the ER nurse) gives the OR nurses a verbal and written account of the patient's condition and progress.

Again, as in the ER, the pace is fast, but finely honed skills and instincts keep the nursing team functioning smoothly.



Flora Wang, R.N. (left), in action in a PH 17 operating room.

As the operation proceeds, Ms. Tenaflorida, the scrub nurse, assists the surgeon with the hands-on aspects of the surgery, while Ms. Wang, the circulating nurse, continues to gather and set up supplies and equipment, keeping one step ahead of the surgeon and anesthesiologist's needs and requests. Ms. Wang also makes several calls to the blood bank for various blood products and to locate someone to bring them to the OR. Her movement is continuous.

In the midst of this finely orchestrated flurry of activity, Ms. Wang must keep track of the various surgical tools and accessories. Before the patient's chest is closed, she will count and recount all the items until everything is accounted for. At some point during the operation, the surgical intensive care unit is notified that the patient will be down shortly. Ms. Wang begins to gather equipment for the patient to be transported to the ICU.

**1:30 a.m.** The operation ends. Again, the hours pass in seconds, but the growing fatigue reminds the nurses of the true passage of time. However, it's not yet time to rest. Ms. Wang and Ms. Tenaflorida must remain in the OR to separate and organize the surgical trays in preparation for the next day's cases.

Meanwhile, the surgeon, anesthesiologist and a nursing attendant accompany the patient down to the ICU, four floors below.

**"Even in the intensive care unit, you get to know patients very well. You can build a bond with a patient overnight. We are emotional beings, so your emotions will get involved at some point."**

—Colette Schafraan,  
nursing care clinician  
Surgical Intensive Care

### Destination: Surgical ICU

**1:00 a.m.** Amidst the beeping monitoring equipment of the surgical intensive care unit on PH 14 East, a phone rings. The Clinical Nurse II, Lilia Ortega, answers and is told that a patient with a gunshot wound of the chest will be down shortly and that he'll need to be ventilated. Ms. Ortega instructs one of the staff nurses, Audrey Sanders, to ready one of the eight ICU rooms. She'll be responsible for this and perhaps one other patient during her 11½ hour shift. She proceeds to set up a respirator, IV lines (for blood, fluids and pain medication) and an arterial line (for blood sampling). She also double-checks all monitoring equipment and readies her paperwork.

**1:35 a.m.** A second nurse joins her as the patient is brought in and moved to the ICU bed. Both work quickly to hook up the equipment and transfer the patient from OR to ICU respirator and heart monitors. Drains are connected to suctioning tubes. Ms. Sanders takes the patient's vital signs and finds that he remains stable.

*Intensive Care Unit.*



Next, Ms. Sanders begins her initial assessment of the patient. She also checks the integrity of all lines and tubes and takes another set of vital signs.

Ms. Sanders's next task is to attend to the patient's physical appearance in preparation for the family visit. Leaving him with one of her colleagues, she goes to bring the family back to the room. She may be the first to tell them of his condition. Aware of the shock of seeing a loved one hooked up to a bewildering array of tubes and wires, Ms. Sanders remains in the room to answer questions and reassure the family. She'll become their link to the patient. The family will call her at the ICU at all hours to keep up to date.

**3:35 a.m.** The normal nursing routine sets in. Every two hours, Ms. Sanders checks all vital signs, peripheral pulses, fluid intake and output, and IV lines. She also turns the patient, percusses his chest, massages his back, and changes his dressings. The routine continues until he is released from the unit.

**5:00 a.m.** The patient remains stable, barely aware of his surroundings, slipping in and out of a fog of anesthesia. At frequent intervals, Ms. Sanders orients him to the ICU, explaining why there's a tube in his mouth (to help him breathe) and that it will be removed when he awakens, allowing him to talk. He probably won't fully awaken until the next day or remember any of what he has been told. Yet the reiteration continues—minutes later he may reawaken, frightened and unaware of what has transpired.

**7:00 a.m.** Change in shift. Ms. Sanders informs the new nurse of the patient's condition and needs, ensuring a smooth transition of nursing care.

**Five days later.** The patient, who has been weaned from the respirator, is transferred to a medical-surgical floor. He is out of immediate danger, but still will require observation and close follow-up of his plan of care by his primary and associate nurses.

In the meantime, major trauma cases have entered the emergency room every day, continuing the never-ending cycle of nursing care at The Presbyterian Hospital.

*This article was compiled with the help of Janice Connolly, nursing care clinician (NCC) for the emergency room, Flora Wang, operating room nurse, and Colette Schafraan, NCC for the surgical intensive care unit.*



# A DELICATE BALANCE

"When I tell people that I'm an oncology nurse," says Kathy Andersen, R.N., "they say: 'Oh, how depressing. How can you do that?'" But if caring for cancer patients has its lows, it also has its highs. Ms. Andersen explains: "I can count on visits from former patients who have recovered. In fact, two who have recovered visit every time they come for a checkup. I always get a big hug and a kiss. Believe me, that keeps me going. And there are others like them."

Oncology nursing may be described as a roller coaster of a job, full of unexpected drops, curves and rises that are guaranteed to send emotions reeling. Over time, the nurse learns to cope with the ups and downs; nonetheless, the ride remains swift, challenging and rewarding.

Other nurses must deal with death and dying; it's inherent in the profession. But oncology nurses face it more than most, especially on a unit like Presbyterian's 22-bed cancer inpatient unit, part of the Comprehensive Cancer Center. The average patient is very ill, coping with the diagnosis of cancer and the side-effects of chemotherapy.

Much of the nurse's time is spent taking care of patients' physical needs, following a primary nursing care practice model. Since chemotherapy weakens the body and suppresses the immune system, nurses must keep patients clean, infection-free and well-nourished. The nurses also spend considerable time mixing, administering and monitoring the chemotherapy.

The emotional needs of the cancer patients and their families are strong. According to Delia Borjal, nursing care clinician (NCC) on the cancer inpatient unit, "A new nurse will learn the technical aspects of caring for cancer patients relatively quickly; learning about the emotional needs goes on forever."

"The word cancer," Ms. Borjal explains, "generates many different feelings in the patient—anxiety, anger, depression—so that when we admit a patient we first must assess how he is coping with the diagnosis, and tailor our nursing plan of care."

Since much of the patient's support comes from family and friends, the nurse also must consider their emotional needs to ensure that they can cope with the

crisis, as well. Some of this counseling and teaching comes during a weekly family support group led by a nurse and a social worker.

The nurses also participate in weekly rounds with doctors, social workers, dietitians and clergy, in which they discuss the psychological needs of patients and families, and preparations for discharging patients.

According to Virginia Day, administrative nurse clinician (ANC) on the cancer inpatient unit, oncology nurses often become very involved with patients and families, sometimes leaving the nurses with no emotional reserve for their own lives. Fortunately, they can ventilate their feelings of frustration and grief in a Friday morning discussion group led by Hannah Jacobson, R.N., Ph.D., a psychiatric nurse.

Outside of these sessions, the nurse knows she always can turn to a peer for support. Through careful screening of applicants, Ms. Borjal and Ms. Day have gathered a staff with similar qualities and commitment. "First of all, they want to work with oncology patients," says Ms. Borjal. "They're very dedicated, and value family support systems and collaboration. And they're open about their emotional needs and responses. It's a high burnout area unless you verbalize your feelings and admit that you might need help. I cannot over-emphasize the importance of the peer relationship in

the unit."

"What also strengthens their group," adds Ms. Day, "is the comradery outside of work."

Because of the extensive support system for nurses on the unit, they are able to find rewards amidst all the stress. Says Ms. Borjal: "We may have a patient who is dying, but we focus on other aspects of the patient—for example, on making his last days as comfortable as possible or on supporting the family. We often get letters from families expressing gratitude for our support."

### **Pediatric Oncology**

Oncology nursing can grow even more complicated when the patients are children, because family interactions are that much more crucial to the patient's care. Thus, a central part of the nurse's role is assessment of the family's strengths and resources. Working from this assessment, she educates and counsels family members so that they can actively participate in their child's care. For a variety of reasons, some parents spend little time with their children, and then the nurse must assume the additional role of parent surrogate.

According to Penelope Buschman, ANC for The Center for Women and Children, it is difficult for every nurse to find the "right balance between feelings of warmth for the patient and a need to maintain some distance from

the patient." When the nurse becomes the parent surrogate, that delicate balance starts shifting. "Very strong relationships develop, and when a child dies, it's devastating for the nurse," Ms. Buschman says.

Young cancer patients also have physical needs that are different from adult patients. Nurses must pay particular attention to infants and toddlers, whose small bodies are highly sensitive to the effects of disease and treatment. When time allows, says Ms. Buschman, many nurses will play with younger children or help the adolescents with hair-washing or makeup—"The extra things that make them feel as if they're really 15 or 16, and people apart from their diseases." Other time is spent teaching the family how to care for the patient after leaving the hospital.

Ms. Buschman's role at Babies Hospital is to support other nurses through weekly group meetings, as well as families. "Daily experiences here can't be taken home very easily," explains Ms. Buschman. "They're not welcome as topics for dinner conversation or at cocktail parties. It's very hard to talk about these things with spouses or friends who are not connected at all with the care-giving."

Ms. Buschman, the author of *A Child Dies: A Portrait of Family Grief* and assistant professor at the Columbia University School of Nursing, also counsels parents anticipating the loss of a child or those actively grieving. Operating from the belief "that parental grief is never resolved, it becomes less intense over time," Ms. Buschman will keep in touch with some families for years if they express the need for support."

### **Caring for the Ambulatory Cancer Patient**

The atmosphere is somewhat different in the oncology outpatient center on the seventh floor of the Atchley Pavilion, where cancer patients receive ambulatory treatment and checkups. (The Day Hospital for children on chemotherapy is on Babies Hospital 5 North.) Day Hospital patients are at a level of health that allows them to receive therapy without hospitalization. Again, most of the nurses' time is spent administering treatments such as blood products, chemotherapy, phlebotomy and plasmapheresis. They must keep up with constant changes in cancer therapy.

Moreover, explains Kathy Andersen,



Pediatric oncology nurses develop a special rapport with their young patients.



*Chemotherapy administration at the cancer day hospital.*

one of the nurses there, it is the nurse's role to assess the patient's overall condition, which includes an evaluation of physical, psychological and emotional states—a task that depends on the nurse's familiarity with individual patients, and extensive experience with cancer patients in general.

"There are times when we have to intercede and confer with the physician about the treatment," says Ms. Andersen. "Doctors write orders for a standard situation. They know more about the patient's disease than we do, but we know a lot about how each patient is tolerating the chemotherapy."

Another nursing task is to prepare new patients for the road that lies ahead. "We counsel patients when they begin chemotherapy and explain what side-effects they may experience."

The nurses on the oncology unit may see as many as 40 patients in one day, leaving relatively little time for counseling. But even a few minutes of talking can be crucial to the patient. "We believe we are a real source of support for patients. When they're depressed they'll often come to us and say, 'You're the only ones who understand what we're going through.' It sounds like we do major counseling in a short time. But

it's not just these brief visits; it's the repeated contact over time and the many phone calls."

On occasion, patients will drop by unexpectedly. "If a patient comes in and asks to talk to us," says Ms. Andersen, "we know him well enough to recognize when he's in trouble."

Actually, Ms. Andersen says, "Most patients come in smiling. Personally, I don't know how they do it." The key, according to Gerry Zunno, ANC for the AP-7 cancer unit, is that the patients here generally are able to continue their daily routines. "They're eating and sleeping at home, and they're around their loved ones."

Despite the unit's upbeat atmosphere, the nurses cannot avoid the pressures of oncology nursing. Patients often worsen and die, leading the nurses to raise questions such as: "What is this all about?" as Ms. Andersen puts it. So, nurses here also rely on support from psychiatric nurse Hannah Jacobson and on their colleagues.

The key to coping for the staff is to focus on the satisfactions of this special nursing field—on improving the quality of life for each patient. Each individual requires a different approach, and each individual returns a different reward.

## NURSING PRACTICE ADVOCATE

Another resource to whom nurses can turn is Marcia Fishman, Presbyterian's nursing practice advocate, who functions as a liaison between staff and administration. Only a handful of hospitals around the country have similar positions. Ms. Fishman's main responsibility is to support the nursing staff in regard to contract problems and professional rights, though more and more of her time is being devoted to crisis intervention.

The problem, according to Ms. Fishman, is that new nurses generally are unprepared for dealing with death and dying no matter how they learned about it in school. And once in practice, "nursing policies and procedures tell you what to do with a patient, but they don't help you deal with yourself or the family or the dying patient."

"Death and dying are not things you get used to," continues Ms. Fishman, "but you learn better coping mechanisms as you go along, and find the resources and people who can support you."

Ms. Fishman, who teaches a course on perspectives of living and dying at Columbia's nursing school, says her primary role is "to listen. I don't tell them anything they don't already know, except that it's okay to grieve. Nurses face very much the same emotions as family members—anger, frustration, disillusionment." She also prepares nurses for the fact that family members sometimes direct their anger and frustrations towards the patients' nurses, because it's emotionally safer than turning on fellow family members.

Nurses from all areas of the hospital come to Ms. Fishman for advice, commonly complaining of "burn-out." Her initial approach is to get the nurse to see the positive side. "I point out that your mind and body are telling you something—that you're ready for change. And I get them to examine what things they would like to change at work or in their personal lives." Sometimes the solution is to teach them simple coping mechanisms, so she directs them to workshops on assertiveness training and conflict resolution.

The result is that nurses manage to stay with their high-stress jobs, and they actually reap new-found personal and professional satisfaction.

# PATIENT TEACHING CENTRAL TO NURSING ROLE IN AMBULATORY CARE

For most people, the word "nursing" brings to mind images of bedside care—the inpatient hospital setting. But nurses also play a vital role in the care of outpatients. This is particularly true at The Presbyterian Hospital, which has become the primary health care provider for its community.

Many residents of Washington Heights/Inwood, a federally designated Health Manpower Shortage Area, come to Presbyterian's emergency room and numerous ambulatory care clinics for all health care. The clinics offer primary care in general medicine, obstetrics and gynecology, and pediatrics. Specialty clinics include dermatology, medical subspecialties, neurology, neurological surgery, ophthalmology, orthopedic surgery, otolaryngology, psychiatry, radiation oncology, rehabilitation medicine, surgery and urology.

Since outpatients require less intensive treatment than inpatients, the nursing care in Presbyterian's clinics focuses on health maintenance and the concept of self care. Away from the watchful eye of the nurse, outpatients must assume a larger responsibility for

their own care, which means they need to know in detail about their illnesses and how to treat them.

## **The Diabetic Teaching Program**

The diabetic teaching program of Presbyterian's general medicine clinic is a resource for an important health problem in the local community and is exemplary of nursing's role in ambulatory care in the Hospital.

**Case Study: Joan Danvers.** A typical patient in the diabetic program, located on the second floor of the Vanderbilt Clinic building, is Mrs. Joan Danvers (a hypothetical patient). She has no family doctor and hasn't had a checkup in years. Mrs. Danvers has come to the emergency room complaining of excessive thirst, weakness, fatigue and headaches. When her medical history is taken, she also reveals that she has been experiencing increased urination, poor appetite and weight loss.

Under evaluation by a physician, Mrs. Danvers is found to have Type I, or insulin-dependent diabetes and she is referred to the general medicine

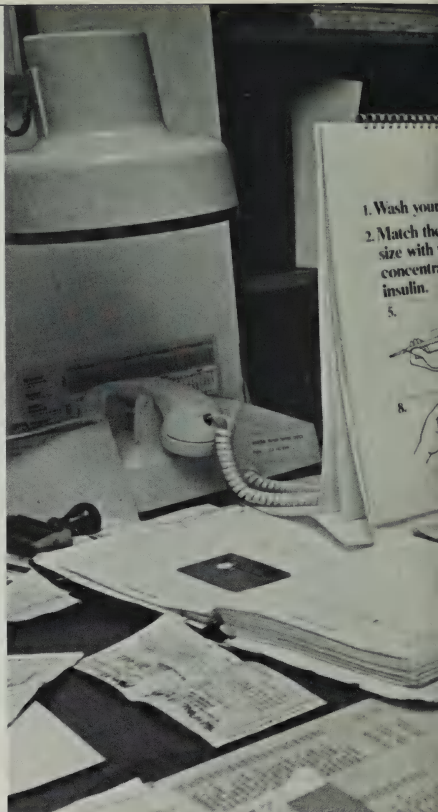
clinic for further medical treatment and counseling.

At the clinic, Mrs. Danvers begins to learn how to control and monitor the disease in a two-and-a-half hour group class. The class focuses on hypoglycemia and hyperglycemia (low and high blood sugar), exercise and stress, diet, hygiene, complications (infections, circulatory problems), vacation precautions and actions to take in case of illness. It is taught by two nurses, Evelyn Thompson and Patricia Devlin, and a dietician, Edith Dorsal.

The next day, Mrs. Danvers and her classmates learn from the nurses about the basics of diabetes care—medication, injections, urine testing and home blood sugar monitoring.

But it is in the daily private sessions with Mrs. Thompson that Mrs. Danvers gains hands-on experience in controlling her diabetes. In these sessions she is taught how to inject insulin and to monitor her blood sugar by pricking a finger and applying a drop of blood to a special strip of paper.

After two weeks, Mrs. Danvers begins to master the techniques, but her blood sugar continues to fluctuate. She





appears discouraged. The problem, Ms. Thompson finds, is with her diet. Mrs. Danvers' husband and children won't go along with her new diet and she doesn't have the time to prepare two different meals. Ms. Thompson's solution is to arrange for a visiting nurse to visit the Danvers home. The nurse will help Mrs. Danvers gain family support for her treatment regimen and assist with meal planning. The visiting nurse forwards a report of the home visit to Ms. Thompson, indicating that the family members asked many questions.

One week later, Mrs. Danvers reports that more of her symptoms have abated. Her spirits rise and she grows more receptive to the program. In a matter of days, she fully masters the techniques. From then on, Ms. Thompson checks on Mrs. Danvers periodically, making sure her condition remains under control.

### **Treating the Noncompliant Patient**

"Most patients are receptive to treatment," says Susan Chestnut, the clinic's Nursing Care Clinician, "if only because they felt so ill before and they don't

want to get sick again."

"Initially, some get anxious about their illness," she adds. Thus part of the nurse's role is to anticipate anxiety before it interferes with their care.

"Some don't accept the fact that they have diabetes," she continues. "And others don't master the techniques because it's a lot easier to come here every day and have the nurse give them the injection."

In each instance, the nurse must understand the patient's response to the diagnosis and provide the guidance and direction to help the patient achieve self care.

Unfortunately, receptiveness to treatment is not a guarantee of success, and again, the nurse plays an important role. For example, some patients, like Mrs. Danvers, have problems at home. Others lack the ability to draw up the insulin. Still others find they can't afford the medication and needles. In such cases, the nurse must pinpoint the problem and call in appropriate resources; a visiting nurse, a social worker or a family member. The ensuing exchange of information focuses on the goal of self care.

Sometimes the challenge is to overcome psychological and cultural barriers to treatment. Diabetes, after all, requires significant changes in lifestyle, says Ms. Chestnut. "You have to help patients with the necessary reorganization of their lives. For example, some patients have never regularly seen a doctor or taken medication. On top of that, now they have to eat differently."

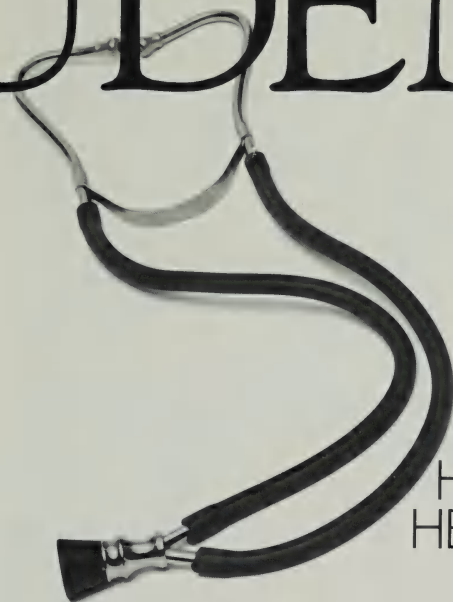
Diet is an important factor in diabetes control. Patients require help in the selection and preparation of appropriate foods. And as in Mrs. Danvers' case, consideration must be given to the food preferences of the other family members.

"It can be very traumatic," Ms. Chestnut continues, "so we have to spend a great deal of time with patients to make sure they follow directions."

Despite such obstacles, says Ms. Thompson, most patients do listen and comply with the treatment. Her recent move from an inpatient unit has resulted in greater involvement in patient teaching, which she enjoys. "You feel a strong sense of accomplishment," she explains, "when patients successfully manage their care."



# THE NURSE AS STUDENT



KEEPING  
UP WITH  
HIGH-TECH  
HEALTH CARE

**Every week, it seems, the media announce the development of a new imaging machine, medication or surgical technique. Even the astute reader can find it tough to keep up. But the nurse must. She must incorporate these and numerous smaller advances into clinical practice.**

As a result, the nurse has become a life-long student, particularly at an academic medical center like Columbia-Presbyterian. From the very moment a nurse starts practice here, the Department of Nursing Education implements an education program that builds on the nurse's experience and prepares the RN for further learning.

Venipuncture training is a case in point. Until recently, Hospital policy dictated that only physicians (with certain exceptions) could start intravenous (IV) lines. IVs are used for administering fluids or drugs, or transfusing blood. But other, more pressing tasks

sometimes delay physicians from starting an IV. Consequently, nurses, doctors and administrators at Presbyterian recently agreed it was time to train staff nurses to start IVs.

Inserting a needle into a vein may seem a simple task, but, actually, it involves 39 discrete steps. For example, the nurse must verify the doctor's order, select an accessible and suitable vein, apply a tourniquet and check for arterial flow, properly cleanse the puncture site, attach the IV bag and securely tape and dress the device.

To complete venipuncture training, says Marti Kaelin, project coordinator

in the Department of Nursing Education, the nurse first must pass a written test and demonstrate the exact technique on life-like rubber arms. If the nurse never has performed venipuncture, she must demonstrate the technique on a volunteer. Final certification comes after demonstrating the technique on two patients. All told, the training takes about six hours.

Venipuncture training began with nurses from the emergency room and from labor and delivery, areas with many daily venipunctures. Ms. Kaelin expects that all Presbyterian nurses will be trained by the end of 1986.

## Telemetry— Remote Heart Monitoring

Some nurses also find themselves back in the classroom to study telemetry, a marvel of electronics that permits radio monitoring of heart rhythms without having to limit patients' freedom of movement. Telemetry also allows physicians to observe patients' reaction to activity, anti-arrhythmic drugs or other medical treatments.

Patients on telemetry monitoring are fitted with small transmitters, or telemeters, whose signals are picked up by antennas on the floor and analyzed in the telemetry area near the cardiac intensive care unit on 9 West.

Telemetry is not needed for patients in intensive care, who are immobile and directly monitored. Remote monitoring comes into play on units where patients may be more mobile, yet still require close and constant monitoring. For example, telemetry is

ideal for patients with cardiac arrhythmias (abnormal heart rhythms that can be life threatening), as well as patients on new anti-arrhythmic medications. Doctors also use telemetry to evaluate patients with implantable pacemakers or defibrillators.

According to Barbara Suchak, instructor in the Department of Nursing Education, the nurse plays a vital role in telemetry, acting as a liaison between the patient, physician and telemetry area. When an anomaly in a heart rhythm appears, the nurse must quickly evaluate how the patient is tolerating the arrhythmia. The nurse will assess the patient's mental state, check his pulse and blood pressure and ask if he is experiencing chest pain.

"The most important aspect of telemetry is the nurse's assessment," says Ms. Suchak. "Based on this information, she initiates appropriate measures to support the patient." The nurse also notifies the patient's physician,

but if an arrest seems imminent, she will begin cardiopulmonary resuscitation and prepare a 12-lead electrocardiograph, which gives a more detailed picture of the heart's electrical activity. She also will instruct other nurses to bring appropriate drugs for the doctor.

A total of 16 telemeters now are in use on three different units at Presbyterian. Additional telemeters also are found in the Babies Hospital unit, although young heart patients generally require less intensive monitoring.

Nurses receive telemetry training in a two-day workshop conducted by the Department of Nursing Education. The workshop, says Ms. Suchak, covers basic heart anatomy and physiology, arrhythmias and arrhythmia identification, patient assessment, cardiac medications and 12-lead electrocardiographs. About 70 nurses have completed the training.



Nurses check for signs of trouble on telemetry monitors.

## Climbing the Clinical Ladder

The Division of Nursing has established a "clinical ladder" which, while offering opportunities for professional advancement, increased status and financial gain, directly challenges past models of career mobility by rewarding nurses who remain in bedside care.

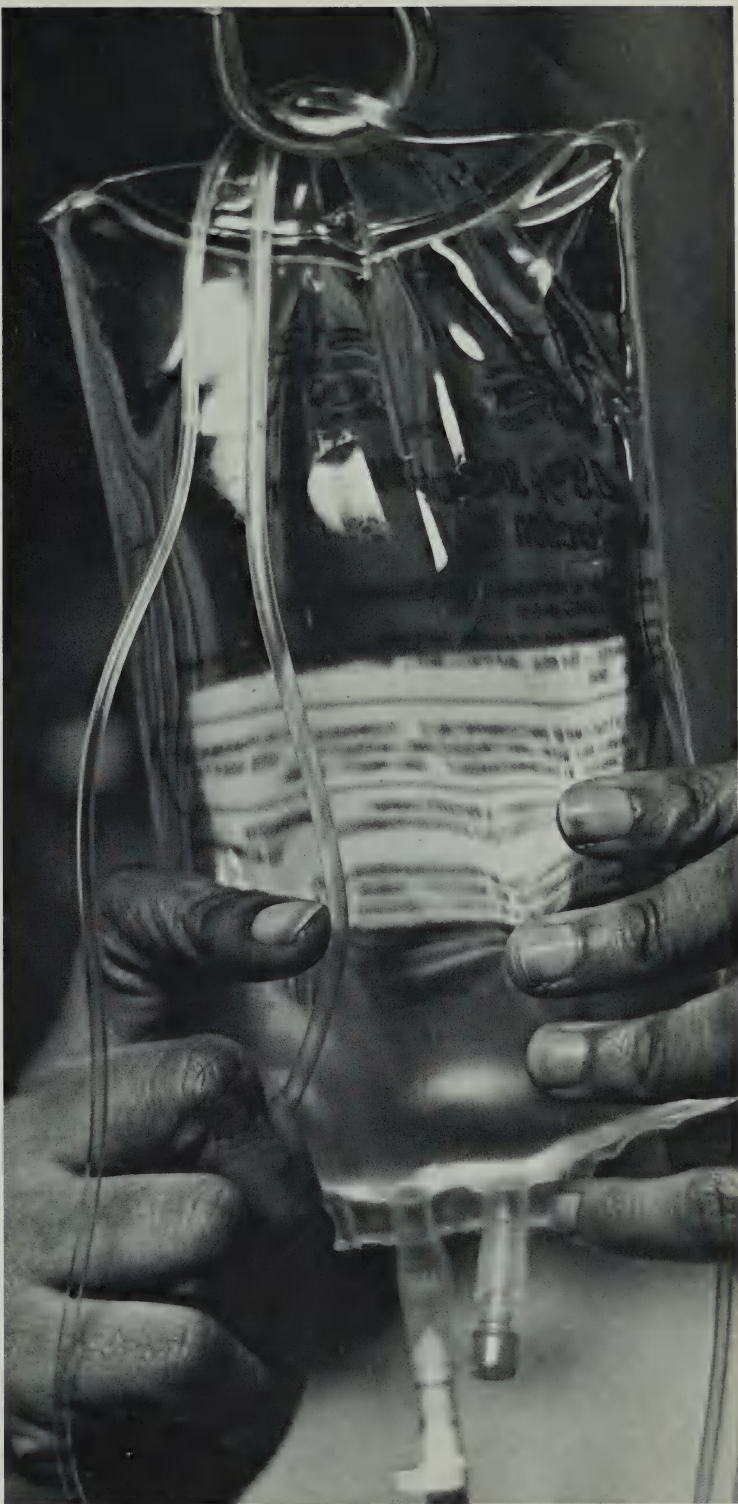
The staff nurse, the primary care provider on the nursing ladder, supplies the foundation for the entire nursing organization, explains Mary Ann West, instructor in the Department of Nursing Education. The next rung is occupied by the Clinical Nurse I (CN I), who has demonstrated both clinical and leadership abilities. She is a professional role model—and preceptor—for new staff and students, and works with other team members and the Department of Nursing Education to create and maintain a dynamic learning environment.

Next in line is the CN II, who has even greater clinical expertise, Ms. West explains. The CN II provides and directs patient care and performs established nursing procedures. In collaboration with the nursing care clinician (NCC), she implements the philosophy, goals and standards of the Division at the unit level. The CN II also supports and extends the leadership of the NCC.

The crucial aspect of the organization, an innovation in health care, is that it allows nurses to grow and flourish within—rather than outgrow—the clinical structure. Previously, the nurse could advance only by climbing an administrative ladder. Thus, the best clinicians left bedside care.

In 1985, the Department of Nursing Education standardized CN II training. According to Ms. West, all current and newly appointed CN IIs have to attend a five-day program that introduces them to the organization and administration of the Medical Center and the Division of Nursing. CN IIs-in-training spend the bulk of the week in classes on communication, effective use of time and resources, working within the system, stress management, teaching in the clinical environment, performance appraisal and personal dynamics of the CN II role.

The program doesn't end there, explains Ms. West. The nurses enter a performance contract that defines the behavior and learning experiences that the CN II must fulfill over the next six months under a preceptor's direction.





*Venipuncture training.*

### **Climbing the Educational Ladder**

Nurses at Presbyterian also have ample opportunity to climb the educational ladder in nursing. LPNs (Licensed Practical Nurses) can attend Presbyterian's Edna McConnell Clark School of Nursing to become RNs (Registered Nurses). RNs can study at Columbia University's School of Nursing to earn a bachelor of science degree in nursing (BSN), and then a masters degree (MSN) in one of 12 specialties.

Understandably, many nurses have difficulty finding the necessary time

and resources to return to school. This is why The Presbyterian Hospital has collaborated with Columbia University to create a unique way for nurses to work full-time *and* study part-time (at a faster pace than usual) for a master's degree. Under the new plan, called PREP—for Practice, Research, Education Program—Presbyterian nurses can earn graduate degrees in acute care nursing of the adult or child.

According to Marianne Burgunder, associate director of Nursing for education, PREP works by allowing staff to fulfill most of the degree's clinical requirements in the present work setting. This permits students to apply

new knowledge directly in ongoing nursing practice and to conduct research related to practice. Moreover, they are guided by clinical preceptors who are experts in the field.

Although Presbyterian must make a heavy commitment to PREP in time, staffing and resources (the Hospital reimburses nurses for their tuition expenses in this and other educational programs), it also benefits from the program. Since nurses do not leave Presbyterian for schooling, there is less staff turnover and more continuity of care. Ms. Burgunder adds "And the nurses do research projects that are beneficial to the Hospital."

## THE NURSE AS RESEARCHER

A key element of graduate training for nurses is learning how to conduct ongoing research in the clinical setting. One benefit of this training, in turn, is learning how to address and resolve current practice problems systematically—a principal goal of the profession.

When Linda Vernocchi, instructor in the Department of Nursing Education, first came to Presbyterian in 1984, she was asked to design a plan to implement a new form of peritoneal dialysis. A treatment for patients in renal failure in which fluid is introduced into the peritoneal cavity, peritoneal dialysis is used to remove waste products normally removed by the kidneys. One of the major goals of Ms. Vernocchi's project was to evaluate the effects of peritoneal dialysis on the quality of patient care, specifically the rate of infection.

Ms. Vernocchi headed the team of nurses and physicians that collected and analyzed data from 55 patients.

The study found that the new equipment, and, more important, a change in nursing policies and procedures, had lowered the rate of infection. Also, Ms. Vernocchi and her colleagues discovered that peritoneal dialysis patients are more prone to fungal infections after prolonged use of broad spectrum antibiotics.

The results of this research, according to Ms. Vernocchi, led to a change in nursing and medical protocols for such patients, which has improved patient care. Currently, nurses throughout the institution are learning about the new equipment, policies and procedures, so that all patients who need peritoneal dialysis will benefit from the research study.

Taesook Kim, a staff nurse in the Neurological Institute's intensive care unit, has also added to the wealth of nursing knowledge. As a student in the PREP program, she conducted a number of research projects.

In one, she studied how moving patients with head injuries affects intracranial pressure (ICP) or pressure within the skull.

Patients must be turned every few hours, explains Ms. Kim, because immobility can cause additional health problems. However, movement raises ICP, which can be dangerous for patients with head injuries.

Ms. Kim decided to take a closer

look at the relationship between movement and ICP and found that the turning movement only temporarily raises ICP. The pressure value returns to the baseline after only a short period of time. She also found that variations in ICP increase depending on whether patients are turned to the right or the left, and is continuing research on this topic.

In another project, Ms. Kim studied the way blood samples are taken to measure arterial blood gases (ABGs). Patients typically have catheters inserted into an artery for blood pressure and ABG measurements. When blood is not being drawn from the catheters, they are filled with anticoagulants to keep them from clogging. To ensure that a pure blood sample is taken for ABG measurement, the first 3 ccs of each sample are discarded. The next 2 ccs are used for

analysis.

Ms. Kim began to question this procedure when she had a patient with Parkinson's Disease who required ABG analysis every four hours. Since the patient also was very anemic, Ms. Kim was concerned about discarding so much blood.

After conducting comparison analyses between the first bloods drawn and the samples actually used, consulting with colleagues and reviewing the literature, Ms. Kim concluded that less blood was needed to measure ABGs accurately. When she presents her findings to the Nursing Practice Committee, she will propose that the procedure be changed.

Ms. Kim also will present this and the research on intracranial pressure at the annual American Association of Neuroscience Nurses 1986 National Convention.



Taesook Kim, R.N.

# NURSE MIDWIVES

## *A Meeting of Tradition and Technology*

From the beginning of recorded time, midwives have been helping women in childbirth. In fact, says Sr. Rose Scalone, a nurse-midwife at The Presbyterian Hospital, the Bible credits midwives with saving the life of Moses.

Despite the long history of midwives and the valuable care they furnish around the world, Americans only now are beginning to recognize their value in the health care system. In most parts of the country, today's nurse-midwife is a highly educated health professional. Although few states still license the lay midwife who has no nursing training but has apprenticed with a physician, most midwives have completed certification programs and earned undergraduate degrees in nursing. Many also have earned graduate degrees.

The new interest in nurse-midwives is due to several factors, among them:

- the women's movement, which taught women they had a choice in health care;
- the growing reliance on high-technology, which made birth an illness, rather than a wellness experience;
- the movement to home birth experiences.

Coincidentally, adds Sr. Rose, more and more nurse-midwives began to

practice in hospitals because physicians discouraged private practice and it became necessary to pursue higher education in order to provide in-hospital service.

Nurse-midwives now fill an important gap in the health care system. Not all women need—or can afford—the services of an obstetrician, yet they do need to be evaluated and followed before, during and after they give birth. Sr. Rose points out that nurse-midwives carefully screen all of their patients and will refer high-risk cases to physicians for treatment and delivery.

### **Low-Tech, High-Touch Care**

In routine pregnancy and birth, Sr. Rose adds, the nurse-midwife and obstetrician can provide the same high level care. "We have to be educated about fetal monitors, ultrasound, and so on, because our health care system has determined that they are valuable for monitoring patients who choose a hospital delivery, particularly high-risk patients. Such education also is necessary if the physician and midwife are to work as a team."

But there is a difference between midwifery and physician care. "The nicest part of midwifery," says Scalone, "is that we can spend more time with a woman to educate her about her

bodily changes. We also can encourage her to be responsible for her health care. We include husbands and family members and invite them to play an active part in the care of the woman. We do not do cesarian sections or forceps deliveries. But, we must know how to recognize a deviation from the norm and make the proper referral. That's part of the art and science of midwifery."

Another important aspect of care by nurse-midwives, Sr. Rose comments, "is that they free up doctors for the high-risk cases, where their expertise is especially needed."

The value of midwifery does not go unrecognized at Presbyterian. According to Doris Barker, administrative nurse clinician for the Nurse-Midwifery Service and associate in Nursing at the Columbia University School of Nursing, "At Presbyterian, we've always had a good relationship with the obstetricians." Moreover, says Dr. Mortimer Rosen, chairman of Presbyterian's Department of Obstetrics and Gynecology, "With changing societal needs, I anticipate an increasingly important role for midwifery within obstetrics and gynecology here."

The nurse-midwifery staff now delivers about one-tenth of all babies at the Hospital and teaches medical, nurse-midwifery and nursing students.





### **Educating Teenagers About Prenatal Care**

Presbyterian Hospital's four nurse-midwives spend most of their time caring for teenagers, with a focus on prevention and education, which is in keeping with the function of an academic medical center, says Sr. Rose, also an associate in clinical nursing at Columbia. Mondays are particularly busy for the nurse-midwifery service,

when as many as 45 teenagers come for childbirth education classes and prenatal care. The remainder of the week is reserved for providing the full spectrum of midwifery care: prenatal and postpartum care, family planning and counseling.

Ms. Barker and her staff also work closely with the social service department and the visiting nurse service, especially when a pregnant teenager reports problems at home.

"The poorest pregnancy outcomes

occur with teenagers who do not have any prenatal care and whom we don't meet until they deliver," explains Sr. Rose. "But we have very fine outcomes with teenagers who register early for prenatal care, come for their visits, eat well and take the vitamin supplements we provide."

"With new cost constraints and a growing focus on illness prevention," adds Ms. Barker, "we will see more nurse-midwifery services in the near future."

# PROFESSIONAL ACTIVITIES OF NURSING—1985

## 1985 Professional Publications, The Presbyterian Hospital Nursing Division



Beatty, J., Gutowski, M., Moleti, C., Yeransian-Nassery, L., "Anger Generated by Unmet Expectations," *MCN*, Vol 10, Sept/Oct 1985, p. 324.

Buschman, Penelope R., "Anger: In the Clinical Setting," *MCN*, Vol 10, Sept/Oct 1985, p. 313.

Duer-Hefe, J.T., Ekstrom, D., Fisher, M., and Hertenstein, C., "Managing Intractable Anger," *MCN*, Vol 10, Sept/Oct 1985, p. 316.

Fishman, M., Contributing author for Clinical Hypnosis and Therapeutic Suggestion in Nursing, Edited by Rothlynn P. Zahourek, Grune and Stratton, Inc., Orlando, 1985.

Golub, Z. and Loizzo, K., "The Ripple Effect of Anger," *MCN*, Vol 10, Sept/Oct 1985, p. 333.

Hurwitz, L.S., Lindgren, H., Dunne, K., "Book review of Etzwiler, D., et al., Learning to Live with Diabetes," for *Diabetes Educator*, 1985.

Hurwitz, L.S., contributing author to Porth, C., *Pathophysiology: Concepts of Altered Health States*, J.B. Lippincott Company, Philadelphia, 1985-86.

Johansen, B. Hoffmeister, D., Dunga, D., and Wells, S., *Standards for Critical Care*, 2nd Edition, C.V. Mosby, St. Louis, 1985.

Kruger, L., "Complications of Transphenoidal Surgery," *Journal of Neuroscience Nursing*, 1985, 17, pp. 179-183.

Lindgren, K., and Lombardo, S., "Avoidance of Anger," *MCN*, Vol 10, Sept/Oct 1985, p. 320.

Mooney, N., co-author, *The Core Curriculum of the National Association of Orthopedic Nurses*, 1985.



## Speaking Engagements/ Workshops

Martha E. Haber, R.N., "Issues in Nursing Practice-Planning Session: American Perspective," International Conference, Professional Nursing Practice and Board Alliances and Columbia University School of Nursing.

"Prospective Reimbursement, Effects on Oncology Nursing Care," Columbia-Presbyterian Medical Center.

Gerontology Conference, Sponsored by Columbia University Center for Geri-

atrics and Gerontology, and Royal Free Hospital, Hampstead, England.

Patricia Kringas, R.N., "Nursing Care of the Myasthenia Patient," American Association of Neurosciences Nurses, New York Chapter.

Laura Kruger, R.N., "Pre-operative Teaching for the Neurosurgical Patient," American Association of Neuroscience Nursing, National Conference, Norfolk, VA.

Rita Ryan, R.N., "Understanding the Patient with End-Stage Renal Disease," Mt. St. Mary College, Newburgh, NY.

Rowena Woodley, R.N., "Nursing Management of the Post Cardiac Bypass Patient—Pre and Post-Operative Care," "Nursing Management of the Angioplasty and Thrombolytic Patient," "Nursing Management, Cardiogenic Shock Transplant Patient," Colombia Society of Cardiology, Ninth Congress, Bogota, Colombia.

## Videotapes

Bowar-Ferres, Susan, *The Heart of the Matter: Hospital Care of the Patient with Parkinson's Disease*, An Intramed Production. Scriptwriter.

Golub, Zola, Helped in production and editing, and appeared in a short video about teaching CPR to parents of premature infants for Hospital Satellite Network Show "Nurses Week".

## Honors and Awards

Mary Fuhrer, R.N.—Life Work Award, The Presbyterian Hospital.

Zola Golub, R.N., B.S.N.—Adjunct honorary clinical appointment at Leinhard School of Nursing, Pace University.

Terri Haus, R.N.—Hugh Barber Memorial Award for Devotion and Service to the Cancer Patients of Queens County.

Linda Hurwitz, R.N.—Elected Vice President, American Diabetic Association, 1985-1986.

Dorothy O'Sullivan, R.N.—1985 Johnson & Johnson Nurse Executive Fellowship, The Wharton School of the University of Pennsylvania.

Colette Schafran, R.N.—Linda H. Green Award, Department of Surgical Nursing, The Presbyterian Hospital.

## Professional Organizations

Virginia Day, R.N., M.S. Participated in the New York State Nurses' Association Nursing Intensity Weights Study, 1984-1985.

Ruth Korn, R.N., M.A., Recipient of New York State Nurses' Association Economic and General Welfare Award for recognition of services and achievement.

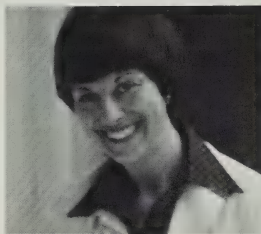
## ANESTHESIOLOGY:

*Dr. Henrik H. Bendixen*, dean of the Faculty of Medicine of Columbia University and vice president for health sciences, delivered the keynote address for the symposium "Interventions for Health Care and Health Protection: Imperatives and Dilemmas," held in October in New York.

## NEUROLOGICAL

**SURGERY:** As a guest of the Japanese Neurological Society, *Dr. Bennett Stein*, director of the service and Byron Stookey Professor and chairman of Neurological Surgery at P&S, presented a continuing medical education course on intramedullary spinal cord tumors to 500 Japanese neurosurgeons in Nagasaki. *Dr. Donald Quest*, associate attending neurological surgeon and associate professor of Clinical Neurological Surgery at P&S, was elected president of the Congress of Neurological Surgeons at the organization's 35th annual meeting in Honolulu. The Congress, which numbers 2,600 members, was founded in 1950 to meet the needs of younger neurosurgeons. It serves as a medium for the development of leaders in the neurosciences and in medicine.

**NURSING:** *Penelope Buschman*, administrative nurse clinician in the Center for Women and Children and



assistant professor at the Columbia University School of Nursing, was coordinator of a special series of articles on anger in the clinical setting that was published in the September-October issue of *Maternal Child Nursing*. Contributing authors included the following nursing staff members: Joyce Beatty, Ms. Buschman, Joan Duer-Hefe, Kathleen M. Dunne, David N. Ekstrom, Margaret Fisher, Zola Golub, Mary V. Gutowski, Carol-Jo Hertenstein, Pamela Hoar, Kathleen J. Lindgren, Susanne Lombardo, Kiyoko Loizzo, Carole Ann Moleti, Patricia Taeschler, Mary Ann West, and Lucille Yeransian-Nassery.

**PEDIATRICS:** *Dr. Stanley James*, attending pediatrician and professor of Pediatrics at P&S, is the recip-



ient of the 1985 Virginia Apgar Award in Perinatal Pediatrics. The award is given annually by the American Academy of Pediatrics "to an individual whose career has had a continuing influence on the well-being of newborn infants." *Dr. Nicholas Cunningham*, attending pediatrician and professor of Clinical Pediatrics at P&S, has been appointed to the Physicians' Advisory Committee of VNS Home Care, a non-profit subsidiary of the Visiting Nurse Service of New York. *Dr. William Silverman* is the author of *Human Experimentation: A Guided Step Into the Unknown* (Oxford University Press, 1985). *Dr. Silverman* was associate professor of Pediatrics at P&S, and associate attending pediatrician and director of the premature nursery at The Presbyterian Hospital, before moving to California in 1967. *Dr. Katharine Merritt*, a member of the department of Pediatrics until

1965, recently celebrated her 100th birthday. She now lives in Stamford, CT.

**PSYCHIATRY:** *Dr. Herbert Pardes*, director of the New York State Psychiatric Institute and chairman of the department of Psychiatry at P&S, has been selected Distinguished Scholar for 1985 by Harlem Valley Psychiatric Center, a regional psychogeriatric center. The award recognizes outstanding contributions to the field of the mentally ill aged. He has also been made chairman of the Scientific Advisory Council of the National Alliance for Research on Schizophrenia, a new organization created by the National Alliance for the Mentally Ill.

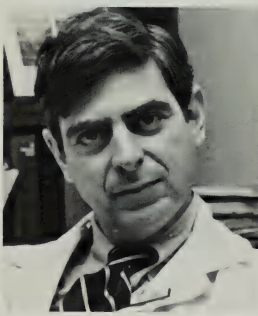
*Dr. Pardes* also organized a symposium in November, entitled "The Translation of Neuroscience Advances in Clinical Psychiatry." It addresses the effects of increasingly sophisticated brain imaging technology and advances in brain biology and chemistry on the daily practice of psychiatry. *Dr. David Shaffer*, director of Child Psychiatry, and *Dr. Madlyn Gould*, assistant professor of Clinical Social Sciences at Columbia University, have been appointed to the Secretary of Health and Human

Services' Task Force on Adolescent Suicide. Dr. Shaffer also was appointed to Governor Cuomo's Statewide Youth Suicide Prevention Committee.

**PUBLIC HEALTH:** The Leo G. Reeder Award of the Medical Society Section of the American Sociological Association has been given to *Dr. Jack Elinson*, professor of Public Health, emeritus. The Award recognizes distinguished research and scholarship in medical sociology.

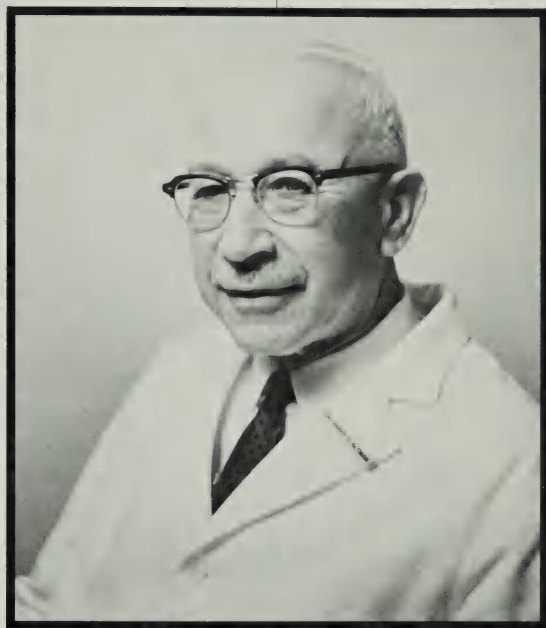
**SURGERY:** *Dr. Norman Hugo*, director of the Division of Plastic Surgery and professor of Surgery at P&S, has been elected vice president of the American Society of Plastic and Reconstructive Surgeons. In November, Dr. Hugo served as moderator of a symposium on mastectomy and breast reconstruction. In addition, he acted as coordinator and presiding officer for a panel entitled, "How to Make a Good Surgical Videotape," at the American College of Surgeons 1985 Clinical Congress in Chicago. Serving on the panel, which took place on October 15, was *Jeff Szmulewicz*, assistant director of the P&S Audio-Visual Service.

### **Dr. Peter Carmel Appointed Chief of Pediatric Neurosurgery**



*Dr. Peter Carmel*, associate attending neurological surgeon, has been appointed chief of Pediatric Neurosurgery. Dr. Carmel, a Brooklyn native, earned his medical degree from New York University School of Medicine and a doctorate in medical science (in neuroanatomy) from the Columbia University College of Physicians and Surgeons. He also holds the position of associate professor of Clinical Neurological Surgery at P&S.

**ERRATUM:** In the November 1985 issue of *Stethoscope*, a report of Joseph P. Corcoran's new appointment listed his title incorrectly. He is executive vice president for administrative affairs and chief operating officer.



### **In Memorium**

*Dr. Harry S. Altman*, former attending pediatrician at the Babies Hospital division of The Presbyterian Hospital, died in December. He was 86.

Born in Russia, Dr. Altman was one of the first physicians to be board certified in pediatrics. His skills as a pediatrician and his reputation for humanity and good judgment earned him widespread recognition from his peers and from community and national leaders. During World War

II, he was appointed chairman of Emergency and Maternity and Child Care in New York City by President Roosevelt.

Dr. Altman still found time to contribute more than 70 articles to the pediatric literature and was especially recognized for his description of polyostotic periostitis, an inflammation of specialized connective tissue that covers all bones.

He is survived by his wife, Gertrude, a son, Dr. Kenneth Altman, and a daughter, Carol.



The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
New York, New York 10032-3784



*Florence Nightingale. Early 19th century engraving*

VOLUME XII, NO. 2

THE PRESBYTERIAN HOSPITAL AT COLUMBIA-PRESBYTERIAN MEDICAL CENTER

# Stethoscope

A surreal illustration featuring the silhouettes of a woman, a man, and a child on a grid floor under a purple sky, with colorful laser lines intersecting them. The woman is on the left, the man is in the center, and the child is on the right holding a teddy bear. The floor is a perspective grid of blue lines. The sky is a gradient of purple and blue. Several bright, multi-colored laser lines (red, blue, yellow, green) crisscross the scene, passing through or near the figures.

REPORT  
FROM THE  
FRONT:

**ARE WE  
STILL  
WINNING  
THE WAR  
AGAINST  
INFECTIOUS  
DISEASES?**

A publication of  
The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
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**Design:** Bessen & Tully, Inc.

**Cover Photograph:**  
Michel Tcherevkoff ©

Published by  
Public Interest Department  
Richard P. Zucker, Director  
The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
New York, NY 10032-3784  
(212) 305-5911

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## Editorial Note

It wasn't long ago that the general public adopted a pretty cavalier attitude towards infectious diseases. Medicine had come through a quarter of a century of unprecedented success in conquering scourges that had plagued mankind for centuries.

The 40's and 50's saw the development of antibiotics whose benefits included the widespread control of tuberculosis. During this time, researchers also developed vaccines against polio, diphtheria, whooping cough, measles, rubella, and mumps. In the late 70s, for the first time ever we effectively eradicated a disease—smallpox—from the face of the earth. It seemed that modern medicine was winning the war.

Then along came Legionnaire's Disease, resistant TB, gonorrhea and hepatitis, toxic shock syndrome, herpes simplex and AIDS. Where did we go wrong?

This issue of Stethoscope explores the past and present of infectious diseases and looks into some issues we all must confront in the ongoing battle of man vs. microbe.

Robin Roy, Editor



BETTMAN ARCHIVE

In the Middle Ages, the Bubonic Plague (also known as the Black Death) wiped out one quarter of the world's population, about 75 million people. Many looked upon the plague as a punishment for sin. Others blamed Europe's Jews for poisoning the water supply, and burned them alive. In the ensuing centuries, people reacted little better to epidemics of cholera, syphilis, influenza and polio.

We look back, sometimes in horror at the reactions of people in epidemics past, sometimes with smug amusement at earlier scientific ignorance. Somehow we're comforted by the knowledge that ours is an "enlightened age." But, in many ways, we were no more prepared for AIDS than our 14th century ancestors were for the Black Death.

As Albert Camus wrote in his novel, *The Plague*, "Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads from the blue sky. There have been as many plagues as wars in history; yet always plagues and wars take people equally by surprise."

How has the public reacted to the "plague" of the 1980s? Some people have interpreted AIDS as a sign from God confirming the immorality of homosexuality. Others have proposed that all AIDS victims—even all gays—be quarantined in order to protect "the rest of us." Victims of the

disease, even people suspected of having the disease, have been evicted from apartments, fired from jobs and banned from schools. Friends and family members have been left to die alone.

Ironically, AIDS is a difficult virus to catch, unlike the terrible diseases of the past. And relatively few have fallen victim—a fraction of the number that die on our highways every year and a much smaller fraction of the millions that died in earlier epidemics.

Fortunately, positive things do come of epidemics. Cholera outbreaks in the 1800s prompted the building of sanitary water and sewage systems. Scientific interest and concern gradually led to the development of vaccines against and eventual eradication of polio, smallpox, diphtheria, whooping cough, measles and other diseases that once threatened whole populations.

Today, some members of the gay population who are at risk are reassessing their lifestyles; volunteers have stepped forward to care for AIDS patients; special hospices have been founded; money for research has been donated.

AIDS is only one of a myriad

of problems faced by intravenous drug abusers, a significant and rapidly growing AIDS population group. Unfortunately, to date, awareness of the risk has not significantly changed their behavior. Yet, the effort to reduce the spread of AIDS in this group must continue vigorously.

There still is much to be done. And there still is much to be learned about the disease itself. But in the context of the history of infectious diseases, progress in the understanding of AIDS is proceeding at remarkable speed. Although we may well be able to overcome this disease medically some day soon, it still remains to be seen if we have the resources and sense of community needed to eradicate "plague mentality."

As Camus wrote: "The essential thing was to save the greatest number of persons from dying... And to do this there was only one resource: to fight the plague. There was nothing admirable about this attitude: it was merely logical... On this earth there are pestilences and there are victims, and it's up to us, as far as possible, not to join forces with the pestilences."

A particularly poignant statement on the AIDS crisis recently was heard from a commentator for public television's *McNeil-Lehrer News Hour*, who said: "The plague revives the oldest lessons: We are afraid of one another, and we need one another."

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# ARE INFECTIOUS DISEASES MAKING A COMEBACK?

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Few subjects have captured the public's attention in recent years as have infectious diseases.

One need only open a newspaper to see the latest developments on and public reaction to such scourges as AIDS, Legionnaire's disease, genital herpes and toxic shock syndrome. Not long ago, when polio and smallpox were being conquered, and tuberculosis was being brought under control, the public developed a sense of security that severe infectious diseases were becoming a thing of the past. Public interest was turning to a new concern: with increased lifespans due to fewer viral and bacterial illnesses, and with the exception of that one last hurdle—cancer, medicine was entering the age of the chronic disease.

Was that public sense of security, alas, a false one?

"Everyone thought, 'We had all these infections. Now, we have all these antibiotics. That's the end of it.' It turns out things were not as simple and under control as people thought," says Dr. Mark J. Goldberger, a specialist in infectious diseases at Presbyterian and assistant professor of Medicine at the Columbia University College of Physicians and Surgeons (P&S). ►

## WERE OUR PREDICTIONS OF VICTORY PREMATURE?

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"In some cases, the successes of modern medicine have yielded some of its most difficult infectious disease problems."



Smallpox vaccination. Circa 1930.

### **Advances Can Yield More Problems**

In some cases, the successes of modern medicine have yielded some of its most difficult infectious disease problems. Recent successes in organ transplantation due to improved immune suppressive drugs have made some people more susceptible to infection. "Certain types of pneumonia rarely seen in healthy

individuals can produce significant problems in immunocompromised ones," says Dr. Goldberger.

For instance, pneumonia caused by the parasite *Pneumocystis carinii* is almost never seen in healthy people, but is a major issue in the health of transplant patients, whose immune systems are suppressed by chemotherapy, and AIDS patients, whose immune systems have been destroyed

by a virus." Says Dr. Harold C. Neu, director of Presbyterian's infectious diseases division on the Medical Service and chief epidemiologist.

"The organisms that cause problems in these patients always have been in the environment, but there were no hosts [susceptible individuals] for them to attack," added Dr. Neu, who is also professor of Medicine and Pharmacology and chief of Infectious Diseases at P&S.

### **New Research Identifies Old Diseases**

Some diseases have been affecting people for some time, but simply have not been recognized until recently. "Legionnaire's disease clearly has existed in this country in epidemic proportions since the 1960's," says Dr. Goldberger. "In 1965 there was an outbreak of pneumonia at St. Elizabeth's Hospital in Washington, D.C. Its origins were never found. However, serum samples from the afflicted patients were saved and frozen. Years later, after the Legionnaire's disease bacterium was isolated, the St. Elizabeth's serum tested positive for it." A similar outbreak in Pontiac, Michigan in 1968, remained a mystery until it, too, ultimately was tested and found to be positive for Legionnaire's disease.

### **'Genius' Bacteria Render Antibiotics Ineffective**

On the other hand, problems that had plagued humankind persistently, but later seemed to be solved, began to recur. The organisms were developing resistance to treatment; they were becoming "immune" to the therapies designed to fight them.

For instance, gonorrhea bacteria developed resistance to penicillin, and went on to multiply and infect new hosts. Ultimately, the resistant strains of gonorrhea began to replace the original ones. "These strains, by and large, originated in Africa and the Philippines and were later 'exported' to the western United States," says Dr. Goldberger.

Alternative antibiotics and therapies often can be used to treat patients with resistant diseases, but eventually, these new treatments may lose their effectiveness, as well. "No matter what, you always will see resistant organisms develop," says Dr. Neu. "The bacteria are there in such huge numbers, that some of them tend to survive. Just as there are geniuses among people, there are geniuses

among bacteria."

Furthermore, man and society change, creating new niches in which infectious diseases thrive.

"The AIDS virus may have been around for years," says Dr. Neu. "But changes in sexual mores and drug addiction have allowed the disease to spread. Furthermore, whereas in centuries past these diseases might have been circumscribed geographically, the convenience of international travel today makes it easy for diseases to become widespread very quickly."

In addition to its values, then, society's habits have an impact on the infectious diseases that strike it. "As early as 1927, *Staphylococcus* bacteria was recognized as the cause of a scarlet fever-like rash," says Dr. Neu. "The introduction of tampons, particularly more absorbent ones, provided a setting for the development of toxic shock syndrome."

Changes in society's habits also can reduce the spread of disease.

"Infections such as typhoid fever, tuberculosis and scarlet fever decreased as sanitation conditions in society improved, even before specific antibiotics for them were available," says Dr. Goldberger.

### **Solutions to Infectious Disease Mysteries Still Elude Scientists**

While experts are gaining more knowledge about certain aspects of infectious diseases, others remain mysteries. "Lyme disease is caused by an organism that lives in certain ticks in Connecticut, parts of New Jersey and New York," says Dr. Goldberger. "It was known in Europe. But how it got introduced in this country is not clear. Another case in point is AIDS: We're learning more every day about how AIDS is transmitted and, therefore, how it best can be avoided, but how to treat it successfully still is elusive."

While infectious diseases are not making a real "comeback"—never having left—they have changed. What are the chances of the average person getting caught in one of these changes? Says Dr. Neu, "The ordinary person with conservative sexual habits, who doesn't abuse intravenous drugs, who takes precautions when traveling in certain parts of the world, and whose immune system isn't compromised isn't going to be at risk for anything more than the same diseases that have been going around for years." ■

**"...No matter what, you always will see resistant organisms develop...The bacteria are there in such huge numbers, that some of them tend to survive. Just as there are geniuses among people, there are geniuses among bacteria."**

# NEW WEAPONS IN AN OLD WAR

## SCIENTISTS FIGHT TO STAY ONE STEP AHEAD OF ELUSIVE ENEMY ORGANISMS

Doctors have developed a vast array of tools to fight the causes of infectious disease: bacteria, viruses, fungi and parasites. However, these organisms have a remarkable ability to leapfrog one step beyond the reach of medicine's newest treatments. As a result, scientists continually must develop new weapons in the war against infectious disease.

The development of antibiotics was one of the most significant milestones in all of medical history. Antibiotics fight infection by interfering with any of the many steps in the bacterial lifecycle.

But some bacteria have the ability to produce enzymes that render the antibiotic useless.

"When that happens, you make structural modifications in the old drugs, you make molecules that destroy the enzymes that inactivate the drug, or you find in nature whole new classes of compounds to combat the disease," says Dr. Harold C. Neu, director of epidemiology and of the division of infectious diseases on the Medical Service of The Presbyterian Hospital, and professor of Medicine and Pharmacology at the Columbia University College of Physicians and Surgeons (P&S). This strategy—used now for over a generation—continues to be the most effective way to fight bacterial diseases.

"Penicillin is a prime example of a drug that has been modified over time," according to Dr. Mark Goldberger, an infectious disease specialist on Presbyterian's Medical Service, and assistant professor of Medicine at P&S. "It started off as penicillin G, and has been modified dozens of ways to produce drugs that are effective against different bacteria."

Carbapenems, imipenems and quinolones are relatively new classes of drugs that are effective because the bacteria they attack have not yet become resistant to them.

### Results Poor in Development of Anti-Viral Drugs

But many infectious diseases, from AIDS to the common cold, are caused by viruses, not bacteria. Unfortunately, there has been very little success in developing anti-viral drugs.

Viruses enter the body's cells and commandeer control of them, using the equipment in the cells to make more viruses. This insidious system affords viruses protection, since destroying them would entail killing the cells in which they reside.

The herpes virus, for example, collects in bundles of nerve cells in the mouth or genital organs. "When you're ill or under stress, they come down the nerve root and re-activate," says Dr. Neu. "There are anti-viral drugs. But these will not eradicate the disease. They decrease the amount of time during which you shed the virus and control many of the manifestations of the illness. But, once you stop taking the drug, they will come back. This kind of treatment only affects the active virus, not the dormant virus in the nerve root. Drugs that can get in and de-activate the virus in its dormant stage have not yet been found."

"While viral diseases are not responsive to specific therapies," adds Dr. Goldberger, "we are doing a lot of work in preventing them. Measles, for example, had been virtually eradicated in this country through the use of an effective vaccine.\* We have no drug that will kill the measles virus, but we can stop the disease from occurring in the first place."

Vaccines are designed to stimulate the body's defenses against specific infections. There are two types of vaccines. Those made from killed whole organisms or parts of them—tetanus and diphtheria, for example—require periodic boosting to maintain immunity. The second type—which includes the vaccines against measles

and rubella—are live viruses, altered in the laboratory so as to cause immunity without causing the disease. These vaccines induce life-long immunity and, therefore, do not require boosters.

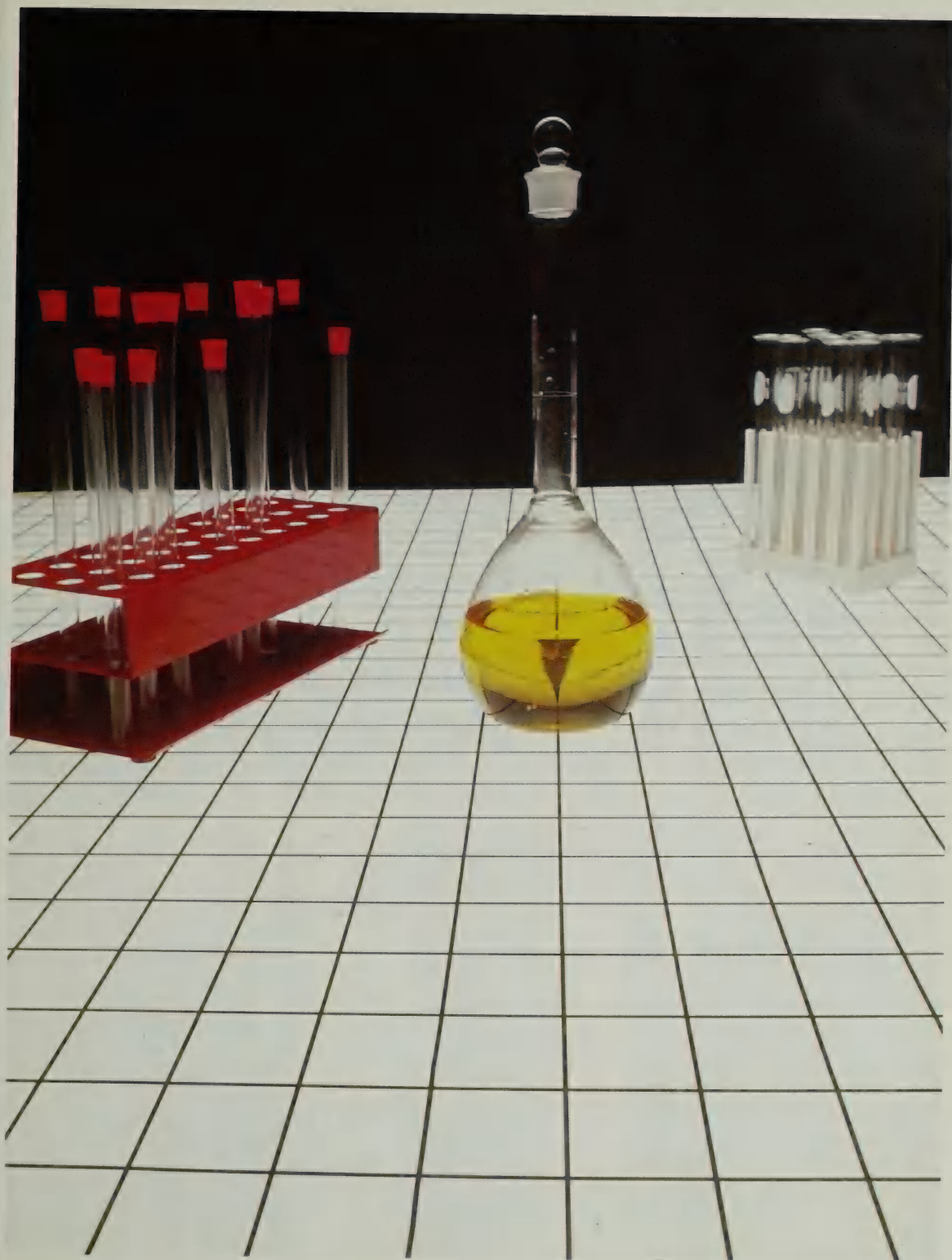
### Genetic Engineering Technology Contributes to War on Viruses

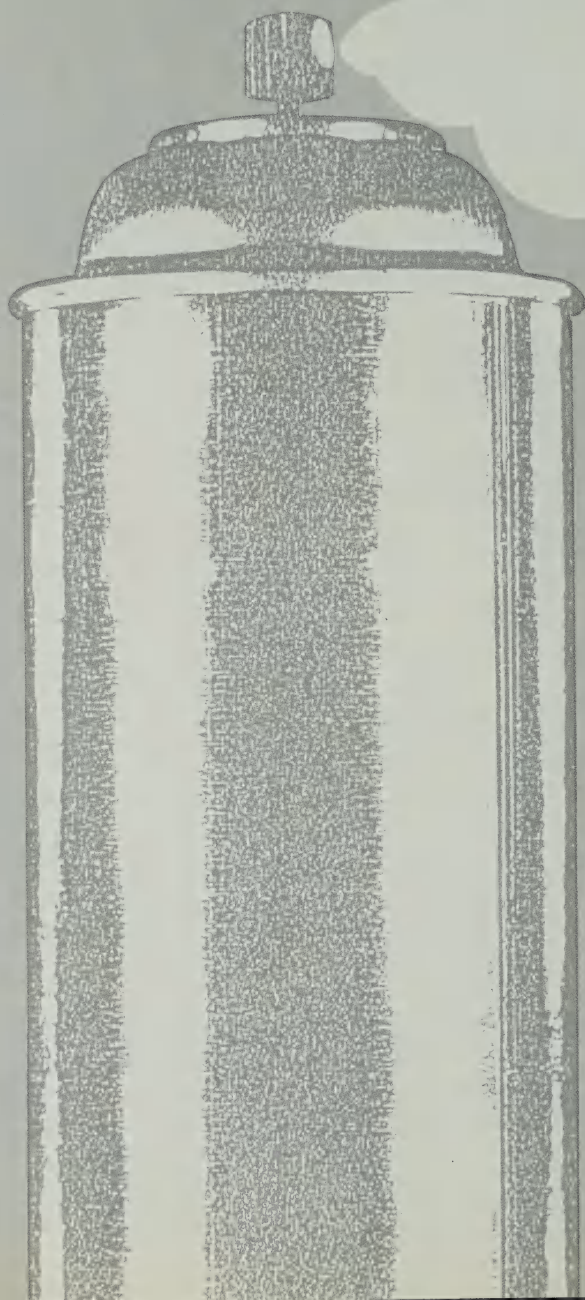
Genetic engineering techniques are now being used to develop new vaccines "that would be effective, but free of certain undesirable side effects," says Dr. Goldberger. For example, if it were possible to produce a piece of the AIDS virus that would induce immunity but not cause the disease, genetically engineered cells could produce it in volume.

Genetic engineering also may lead to the mass production of a new drug that shows some promise as an anti-viral agent: interferon, which prevents viruses from infecting cells. It may be given directly to a patient, or drugs can be administered that stimulate the body's natural production of the substance. "But it is still at the dawn of its development," warns Dr. Goldberger.

A generation ago, at the dawn of development of treatments that eradicated diseases such as polio and tuberculosis, many people felt that the end of all infectious disease was at hand. Was this a pipe dream, or is that goal still within reach? Says Dr. Neu, "The fact that nature always seems to be a jump ahead of us—that is, that evolution is always turning out biocellular enemies—means that we will probably always have new battles to fight. However, we're fighting the battles faster than we used to, and each one makes us smarter when the next one comes along." ■

*\*This was true, but recently there has been an increase in cases, culminating in a major epidemic among unvaccinated children in northern New Jersey in April of this year.*





A WORLDWIDE COMMUNITY:

# **GEOGRAPHY NO LONGER IS A BARRIER TO THE SPREAD OF INFECTIOUS DISEASES**



While scientists may have won many battles against infectious diseases, the war is not yet over.

"Historically, in the United States, infectious diseases are at an all time low, says Dr. Sam Toussie, assistant clinical professor of public health in the Columbia University Health Sciences Division. "But we're now seeing many more resistant strains of bacteria...even strains that are resistant to several antibiotics, so treatments no longer are effective.

"In the future we will see more of these developing. Will we ever see a true superbug that's resistant to everything we know? That's not science fiction. It can happen." ►



Dr. Sam Toussie in Africa.

### **"We're One Step Behind The Bacteria"**

Dr. Alice Prince, a physician on the Medical Service at The Presbyterian Hospital and assistant professor of medicine and microbiology at the Columbia University College of Physicians and Surgeons (P&S), agrees: "Bacteria are much 'smarter' than we are. We have organisms that already are resistant to drugs not yet on the market," she said. "We're always one step behind the bacteria."

Resistance to antibiotics is only one of the hindrances scientists face in their fight against the spread of infectious disease. Other factors include resistance of hosts to insecticides, the spread of diseases by world travel and the threat of hospital-acquired diseases, especially to immunocompromised patients.

The development of resistant strains of bacteria is a relatively simple natural phenomenon. "When we eliminate a natural inhabitant of a particular ecological niche, something else takes its place. So, if we kill off all the bacteria *without* genes that induce resistance to antibiotics, it's just a matter of time before bacteria *with* those genes will emerge," explains

Dickson Despommier, Ph.D., professor of public health and microbiology in the Health Sciences Division of Columbia University.

Bacteria that resist penicillin, for example, contain a gene instructing them to produce penicillinase, an enzyme that breaks down the antibiotic. Currently, the most famous penicillin-resistant bacterium is a strain of gonorrhea called Penicillinase-Producing *Neisseria gonorrhoeae* or PPNG. Researchers suspect that the strain started in the Philippines among prostitutes who routinely took antibiotics, and later spread to the rest of the world, apparently via soldiers and sailors stationed in East Asia. "The overuse and misuse of antibiotics, particularly in low doses, has been responsible for the bacterial resistance we now find," says Dr. Despommier.

Antibiotic abuse is not restricted to humans. These drugs also are fed in massive quantities to livestock to fatten them, which some scientists believe contributes significantly to the development of resistant strains of bacteria.

Among other bacteria resistant to antibiotics are some of those that cause pneumonia, and *Staphylococcus*

*aureus*, a common bacterium which lives on the skin and sometimes infects wounds and surgery sites, according to Dr. Despommier. Resistance also has appeared among some forms of tuberculosis to streptomycin and malaria to chloroquine, he adds.

"Homeless people are particularly ripe breeding grounds for resistant organisms, especially for resistant pneumonia and tuberculosis, because these people generally are in poor condition, usually don't get adequate care, and do not go through a full course of treatment," says Dr. Toussie.

### **Computer Drug Modeling Helps 'Outsmart' Organisms**

"Organisms can make infinite alterations that don't hurt them," notes Dr. Prince. Researchers try to outsmart resistant organisms by modifying the basic antibiotic molecule. One way of doing this is through a new science called computerized drug modeling which employs a computer to develop a three-dimensional picture of the antibiotic, explains Dr. Despommier. "Then the drug's chemistry is altered so that its antibiotic activity is retained, but resistance is avoided

because it doesn't allow for breakdown by enzymes produced by the bacteria.

"But as bacteria adapt, each new generation of chemically synthesized antibiotics—such as the cephalosporins—becomes harder to develop and more expensive to use. Genetic engineering may help lessen the cost because it provides ways to dissect out the gene in an organism that makes the antibiotic and insert it into another species that is easier to grow in the lab," says Dr. Despommier.

### **Use of Antibiotics Should Be Selective**

Still, doctors are urged to slow the spread of drug-resistant organisms by prescribing fewer antibiotics and ordering them only after laboratory tests confirm that the illness is caused by bacteria responsive to that particular drug.

Just as bacteria become resistant to antibiotics, mosquitoes such as those that transmit malaria and other disease became resistant to the insecticide DDT after it was sprayed randomly and in low doses, Dr. Despommier notes. "If it is used properly, that is, targeted in high concentrations to eliminate mosquitoes from their breeding sites, resistance is decreased and malaria can be eradicated—as it was in Trinidad and Jamaica."

Malaria, one of the world's largest infectious disease problems, infects more than 300 million people and kills about one million children in Africa each year, according to Dr. Despommier. In addition to resistance to drugs and insecticides, the Third World's focus on irrigation also has played a role in the continued spread of malaria. The construction of canals increases the breeding range for mosquitoes and other disease-carrying parasites.

Another form of computer modeling attempts to predict future outbreaks of an infectious disease in a particular population, notes Dr. Toussie. "If this were possible, many diseases could be prevented through early intervention either by vaccination, by breaking the chain of transmission or by treating the first few cases immediately. But such models are difficult to develop because the environment constantly is changing. Even if they were available, we still don't have a cost-effective way of limiting the spread of diseases."

As early as the 6th century, when

bubonic plague came to Europe via the trade routes, world travel has played a role in the spread of infectious diseases, says Dr. Toussie. "In this century, the influenza epidemics of 1917 and 1968 surely were spread by travelers coming from affected areas to non-affected areas. Today, with more and more people traveling to Third World countries, the risk of an individual coming down with a disease such as malaria or schistosomiasis is high.

"Now, there is also a concern that travelers can bring back a disease called dengue fever from endemic areas such as the Caribbean, Southeast Asia and Africa. Because the specific species of mosquito that spreads the disease is already in this country, an infected person bitten by the mosquito could potentially start the cycle.

"Anything that needs poor sanitation to spread—cholera, for example—will not spread here. But those diseases that require close personal contact (such as measles, influenza, pneumonia, tuberculosis and sexually transmitted diseases) or transmission by an insect which already lives here are of concern," says Dr. Toussie. "Measles, which became rare in the United States by 1982, has increased recently, and now there are more than 5,000 cases each year. People stopped getting vaccinated and the first outbreaks occurred among college students who had returned from vacations in Mexico."

"World travel has decreased geographic boundaries and made us one large community," says Dr. Despommier.

### **Hospitalization Can Be Hazardous to Patients Prone to Infection**

For some people, even hospitals pose a risk. "Those most susceptible to hospital-acquired infections are the elderly, infants, and patients in intensive care units or those who are immunocompromised by an illness, chemotherapy or other immunosuppressive agents," says Margaret Fracaro, R.N., infection control coordinator at The Presbyterian Hospital.

Bacteria are ubiquitous in hospital environments—they can grow on catheters, in intravenous fluids and in vases of flowers. Invasive procedures, such as surgery and the insertion of catheters and intravenous lines, "also provide bacteria with a potential port

of entry into the body," says Fracaro, who is part of an aggressive program at Presbyterian to prevent infection from occurring.

According to the Centers for Disease Control, about 3 out of every 100 patients discharged from hospitals develop a "nosocomial" or hospital-acquired infection. The most common infections are those of the urinary tract, followed by surgical wound and lower respiratory tract infections and bacteriemias (infections sometimes associated with prolonged IV therapy).

Transplant patients are particularly at risk for fungal lung infections that may spread through the air, Fracaro notes. "Thus, we make sure the filters that control the air are changed routinely. Also, we don't admit patients to areas undergoing construction because knocking down walls allows the fungi living in those walls to enter the air."

### **Special Procedures Help Control Hospital-Acquired Infections**

Infection-control units (mandated in 1976 by the Joint Commission on Accreditation of Hospitals) enforce strict infection control policies, including infection investigation and reporting, patient care practices, and patient isolation and contact policies.

Many hospital-acquired infections can be prevented by properly disposing of needles, sterilizing equipment and frequently changing intravenous catheters, says Fracaro. Proper and frequent handwashing is still the best safeguard against hospital-acquired infections, she adds.

Presbyterian and other hospital infection control teams survey patient care units for the number of infectious diseases patients develop. "If there is an increase in hospital-acquired infection on a particular unit, we track down the cause and review patient-care practices with personnel," Fracaro says.

"The more sophisticated our health care, the higher the risk of infection," says Fracaro. "For example, 15 years ago we didn't do heart transplants. Now we may have 2 or 3 per month in our open-heart recovery room. Since these patients are receiving immunosuppressive therapy and may have several IV lines in them, they are extremely susceptible to infection. Understanding and utilizing infection control practices can significantly lower the risk of acquiring infections."

WHAT  
DO WE KNOW  
ABOUT  
CHILDREN  
WITH

# AIDS?



CLARE WOOD

Last fall, tension mounted in New York City when parents kept thousands of children home from school to protest the city's decision to let a second-grader born with AIDS attend classes.

Parental concern over the possibility that children would contract AIDS from classmates was first publicized when 13-year-old Ryan White, a hemophiliac who had been infected with the AIDS virus through a blood transfusion, was refused admission to school in Kokomo, Indiana.

Five years after a severe form of acquired immune deficiency was first identified in homosexual men and intravenous drug abusers in New York City, San Francisco and Los Angeles, AIDS has become one of the most common immunodeficiency disorders, spreading to other high-risk groups, including children born either to women with AIDS or those who are carriers of the virus.

A woman may be a carrier if she is in a high-risk group or is sexually involved with a member of a high-risk group. ▶



**"There have been documented cases of twins born to HTLV III/LAV positive mothers in which one child developed full blown AIDS and the other was not even positive for the antibody... It seems to be random in the way it affects different individuals."**

Other children affected by the disease are those who have received contaminated blood transfusions. Since routine screening for the AIDS virus, HTLV III/LAV, has been introduced, the risk to this last group will begin to decrease, but those who received transfusions previously still are at risk.

The number of adult AIDS cases in the United States has more than doubled every year since 1981—surpassing 15,700 last December. The number of pediatric cases also has increased rapidly. At the end of 1985, the Centers for Disease Control reported 229 pediatric AIDS cases diagnosed in the U.S. New York State topped the list with 91 cases.

### **Small Percentage Infected With AIDS Virus Develop The Disease**

Not everyone infected with the AIDS virus has developed the deadly syndrome. Some people have no symptoms at all but can spread the disease. Others develop a mild immune system suppression, with symptoms such as weight loss, fever, malaise and swollen lymph nodes. The syndrome, called AIDS-related complex (ARC), may develop into classic AIDS.

"Actually, from what we've seen so far among adults, only between 5 and 10 percent go on to develop AIDS within 2 years," says Dr. Jane Pitt, associate professor of Clinical Pediatrics at Columbia University College of Physicians and Surgeons (P&S) and the pediatrician who treats most of the pediatric AIDS cases at The Babies Hospital division of The Presbyterian Hospital.

### **Method of Transmission From Mother To Child Is Still Unclear**

There are many other remaining mysteries about the AIDS virus. Among them is when and how it is transmitted from the mother to the child. "Since the virus is found in the blood, it may be acquired *in utero*. But there also is the possibility that it is transmitted during birth," says Dr. Sarmistha Hauger, a pediatrician specializing in infectious diseases at The Presbyterian Hospital and assistant professor of Clinical Pediatrics at P&S.

"Typically, parents of children with AIDS are not sick, but if you follow them over time a large percentage will

develop the disease," says Dr. Pitt. "Usually, the father is a drug addict, but the mother may or may not be. In any case, the parents do not suspect anything until the baby gets sick." Dr. Pitt speculates that mothers who are clinically ill are less fertile, so it is the asymptomatic carriers who are more likely to have children.

Moreover, the number of children who inherit AIDS from drug-addicted parents is expected to increase.

"The gay population understands the risks involved and has reduced its exposure considerably. While the incidence of AIDS in the gay population of New York City and San Francisco actually is decreasing, it is increasing in the drug addict population," says Dr. Pitt. "So, their children will continue to be at risk."

"Infants born with most congenital infections show certain signs and symptoms, but AIDS has a long incubation period and no symptoms appear at birth. It is therefore difficult to determine when the infection occurs," says Dr. Hauger. "In addition, we don't know the significance of a positive antibody test in a six-week-old baby. At that age it still could be antibody passed from the mother."

The risk of infection to infants born to mothers who have the AIDS virus still is unknown, says Dr. Hauger. "There have been documented cases of twins born to HTLV III/LAV positive mothers in which one child developed full blown AIDS and the other was not even positive for the antibody," she notes. "It seems to be random in the way it affects different individuals."

### **CPMC Participating in AIDS Epidemiology Studies**

Columbia-Presbyterian Medical Center is one of several institutions in New York City participating in a federally funded study to help answer questions about the likelihood of a mother who tests positive for the virus passing the infection on to her baby, as well as the natural history of the disease in children, notes Dr. Pitt.

For example, based on cases of adults who developed AIDS through transfusion with contaminated blood, the incubation period, or time from infection with the virus to the onset of symptoms, ranges from one month to five years, according to Centers for Disease Control (CDC). The average incubation period in children with

(continued on page 16)

## AIDS AND THE PRESBYTERIAN HOSPITAL: TREATING AND EDUCATING PATIENTS, VISITORS AND STAFF

During the past year, media attention over AIDS has aroused concern throughout the nation. At hospitals across the country, caring for AIDS patients has become a daily experience, but among some patients, visitors and employees, confusion and misinformation have created an ugly spectre of fear.

In response, our Hospital has taken an active approach in promoting understanding of AIDS. This activity has included media appearances by members of the medical staff, public colloquia, and internal programs to educate Hospital employees.

### AIDS Cannot Be Transmitted Through Casual Contact

Based on findings by the Centers for Disease Control (CDC) and in concurrence with policies adopted by the American Hospital Association, physicians are confident that transmission of the AIDS virus occurs in only a few ways: 1) through sexual contact; 2) by intravenous exposure,

in particular, through the sharing of needles and syringes when injecting illicit drugs\*; and 3) from mother to infant, probably *in utero* and during birth, and *possibly* after birth.

The virus cannot be spread through the air by a sneeze. Nor can it penetrate the skin. It cannot be transmitted from a stretcher or a mattress used by an AIDS patient, nor from dishes or silverware.

Physicians cite two main points of evidence against the possibility of transmission of AIDS through casual contact:

—Of the over 16,000 known AIDS cases to-date, not one family member (including foster families of AIDS patients) who did not fall into one of the other known risk groups has contracted the disease.

—While AIDS has occurred in health care workers, in almost all cases, these people were known to have one of the well-defined risk factors for infection. (One risk of

infection to hospital employees is by accidental needle sticks. Accordingly, proper disposal of contaminated syringes and intravenous needles is a key element in infection control.)

### Hospital Staff Follows CDC Guidelines

Within the Hospital, employees and physicians follow CDC recommendations for the care of AIDS patients. Procedures focus on protecting healthy and immunosuppressed individuals from the AIDS virus. But, just as importantly, they guard AIDS patients themselves against infection (to which they are particularly susceptible). In addition, the guidelines help assure that AIDS patients receive the same high level of care and confidentiality provided to other patients in the Hospital.

*\*There have been no reports of transfusion associated transmission since donor self-exclusion procedures and routine screening for the HTLV-III virus were initiated early in 1985.*



Children protesting presence of student with AIDS in school.

"If [transmission of the AIDS virus] hasn't happened in household situations, in which it is very difficult to prevent close contact, it is highly unlikely that it will happen in schools."

(continued from page 16)

transfusion-associated disease is about eight months, whereas in children born to high-risk parents it is four months.

However, the actual length of incubation is difficult to determine, because there have been several cases outside the expected "norm," notes Dr. Pitt. "We had one child who was born with AIDS in 1978 and the mother developed it seven years later. In addition, there have been several documented cases of children who didn't develop AIDS until they were five years old and there was no risk factor other than transmission from the mother," she explains.

### **Development of AIDS in Children Generally Follows Adult Patterns**

Once a child is diagnosed as having AIDS, the virus already has unleashed its deadly weapons against the body's immune system. Initial symptoms in babies include failure to thrive, recurrent or persistent thrush (a yeast infection characterized by the formation of small whitish spots in the mouth), chronic diarrhea, lymphatic disease and recurrent severe bacterial infections such as meningitis.

The initial symptoms can last up to several months or even longer before opportunistic infections or a malignancy develops. As in adults, *Pneumocystis carinii* pneumonia is the most common infection, occurring in 70 percent of the pediatric cases reported to the CDC. In addition, children can develop lymphocytic interstitial pneumonia, a disorder not seen in adults with AIDS. Kaposi's sarcoma, a form of cancer primarily seen in homosexual men with AIDS, is rare in children.

By treating the infections, physicians can prolong a child's life and enable him to go home for a while. "But once there are several infections to deal with at once, the situation begins to deteriorate rapidly. In any case, we consider the social ramifications as well as the medical problems. Often a child must stay in the hospital because there is no one at home to care for him. This is especially true when the parents are in high-risk groups or when they are socially disadvantaged. We try to find foster care, but that is extremely difficult," says Dr. Hauger.

"It can be discouraging. As physicians, we have to find the

balance between being an effective caretaker and getting emotionally involved with the children," says Dr. Hauger.

Very often, however, the children themselves manage to deal with their illnesses better than do their families and caretakers. "Children are incredibly adaptable and do much better than adults in coping with life and death," says Dr. Hauger.

### **Mysteries About Transmission Remain, but Casual Contact Is Ruled Out**

Progress in research to find a treatment for AIDS has been very slow, and with no cure in sight, AIDS remains a fatal disease. More than half of the adults and children diagnosed to have AIDS since 1981 have died, according to CDC records.

But the CDC continues to emphasize that only very intimate contact spreads the disease and that most children with AIDS can attend school without posing a risk to their classmates.

The best evidence against transmission by casual contact is from studies of household situations, notes Dr. Hauger. There have been no cases of AIDS among foster parents who have been taking care of AIDS children for the past three to four years, or among siblings of children with AIDS who had no risk factors, themselves; neither did these people test positive for the antibody to the virus, she explains. Thus, it appears that the virus must be present in very large amounts and under very special circumstances for infection to occur. "If it hasn't happened in household situations, in which it is very difficult to prevent close contact, it is highly unlikely that it will happen in schools," says Dr. Hauger.

According to Dr. Pitt's calculation, the risk of a child in the New York city school system in 1986 developing AIDS from another child's bite would be somewhere between one in a billion and one in a trillion. "There is just no way it will happen," she says.

She and other researchers agree that until a vaccine or a form of treatment is found, prevention through education is most important in curtailing the spread of AIDS. "Issues which parents have been trying to deal with for years have moved to a new level of seriousness. Children, especially, must be informed about the risks of casual sex and use of illicit drugs," says Dr. Pitt. ■

# SYNTHETIC GROWTH HORMONE BOON TO DEFICIENT CHILDREN

Doctors at Presbyterian and a small number of other hospitals in the United States now are using a synthetic growth hormone to help children whose physical growth otherwise would be severely suppressed.

The synthetic hormone, approved by the Food and Drug Administration (FDA) last fall, is used to stimulate growth in children deficient in the natural hormone, and who otherwise would not grow to a normal height. At the same time, it promotes the development of stronger muscles and counteracts a tendency toward hypoglycemia.

"We estimate that without this drug, many of these children might not grow to be more than about four-and-a-half feet tall," explains Dr. Jennifer Bell, a pediatrician in the Division of Endocrinology of Presbyterian's Pediatric Service and associate professor of Clinical Pediatrics at P&S. "This kind of growth deficit also can have a devastating psychological impact on the individual who suffers from it."

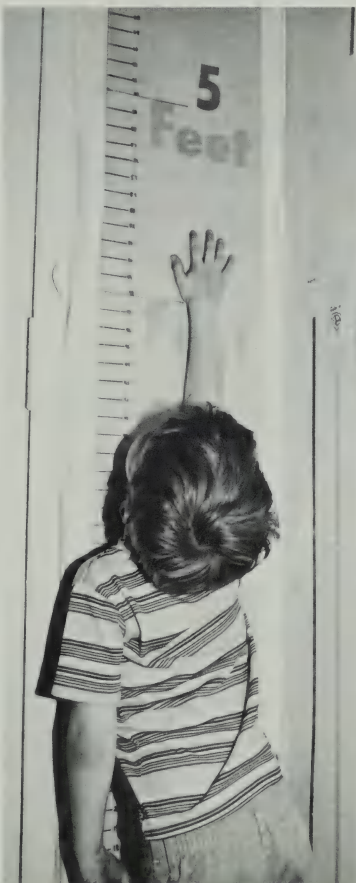
Dr. Bell and her colleagues at Presbyterian were among many physicians nationwide who prescribed the natural growth hormone as part of a National Institutes of Health (NIH) research study. The NIH instructed physicians to stop using the hormone in April 1985, when three deaths from Creutzfeldt-Jakob disease were reported

among patients who had taken it.

A so-called "slow virus infection," Creutzfeldt-Jakob disease came to national attention when George Balanchine, ballet master of the New York City Ballet, succumbed to it in 1984. The disease, which is extremely rare, with one to two cases per million a year, attacks the grey matter of the brain, causing jerkiness and stiffness of the limbs, mental changes such as confusion and depression, and eventual death.

Creutzfeldt-Jakob disease is a medical enigma among slow virus infections, a group which includes a measles virus (SSPE) and which may include the AIDS virus (HTLV III/LAV). As a group, these illnesses are characterized by their long-incubation periods and their insidious natures. However, Creutzfeldt-Jakob disease, which may take as long as 10 years to manifest itself, may not be caused by an ordinary virus at all. "Research indicates that the culprit may be a protein particle we refer to as a 'prion,'" says Dr. James Miller, Presbyterian Hospital neurologist and associate professor in clinical neurology at P&S.

Some scientists believe that the "prion" infiltrates a cell and then triggers it to produce overwhelming amounts of the protein, killing the cell in the process. Researchers still are puzzled by the mode of transmission and the incubation period, which can



be as short as a few weeks or as long as a decade.

The medical community did not immediately link the growth hormone deaths to Creutzfeldt-Jakob disease. Prior to these cases, incidence of the disease in people under 50 years of age was extremely rare. Since this discovery, however, a massive effort has been undertaken by all the hospitals in the NIH study to contact and track all patients who took the growth hormone.

"We immediately sent out letters to patients in our files dating back to 1963, and with the help of the NIH, are trying to find those who haven't come in since the early 70s," says Dr. Bell. Between April and October of 1985, before synthetic hormone was approved by the FDA, no growth hormone was available. The lack of the drug was of critical concern to Benjamin, whose two sons are growth hormone patients. One son was reaching the stage of development at which the epiphyseal or "growth" plates in his bones harden, and growth stops. At age sixteen, he was under five feet tall.

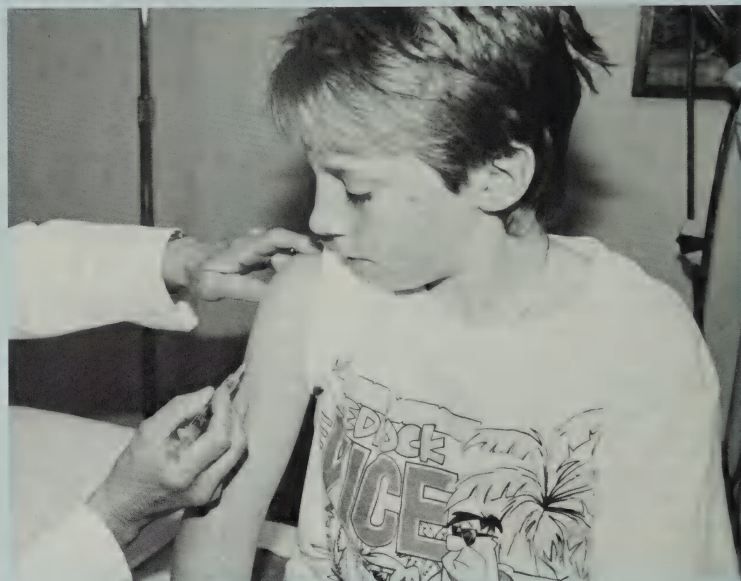
To his father, the six months of waiting "seemed interminable. My son's biological clock was ticking, and I was prepared to do anything I could." He waged a personal campaign several months long, during which he was in constant contact with the manufacturer of the synthetic growth hormone, and then with the FDA, from which he finally learned of the exact approval schedule for the drug.

In some ways, this boy is lucky; his "bone age" is actually younger than his chronological age, so, there still is time for the synthetic growth hormone to have an effect. Nevertheless, every day counts. "We estimate that the growth hormone could make a difference of about half a foot in my son's height. It was a great relief when the synthetic hormone was approved."

And what of the father's concerns over his sons' risks of exposure to Creutzfeldt-Jakob disease?

"Naturally, it would have been catastrophic," he commented. But his worry has decreased over time. His cautious optimism is echoed by Dr. Bell. "We are encouraged by the fact that there have been no cases of Creutzfeldt-Jakob disease associated with growth hormone in the United States since the original three cases." ■

## CHICKENPOX VACCINE UNDER EVALUATION AT THE PRESBYTERIAN HOSPITAL



A chickenpox vaccine that currently is being used to protect leukemic pediatric patients, promises to have applications in wider segments of the population.

The vaccine, being evaluated at Columbia-Presbyterian and other medical centers, is being given to children whose leukemia is in remission but who are prone to infection as a result of the chemotherapy they have been given. The vaccine has been very successful in this group.

"The vaccine is nearly 100 percent effective against severe varicella-zoster [the virus that causes chickenpox and shingles], and 80 percent effective against ordinary chickenpox," says Dr. Anne Gershon, director of the Division of Infectious Diseases in Presbyterian's Pediatrics Service and professor of Pediatrics at P&S. Leukemia patients are immunosuppressed as a result of their disease and therapy. Without the vaccine, 5 percent of the patients with leukemia who contract chickenpox die from it,

and 25 to 30 percent require several weeks hospitalization to recover from the illness.

"Not only is the vaccine highly effective, but the immunization process, which consists of two doses of the vaccine administered three months apart, needs to be administered only once for continuous immunity," explains Dr. Gershon.

Currently there is no chickenpox vaccine in general use. The illness, itself, is common in childhood and does not recur in that form. It may, less commonly, manifest itself later as shingles. Chickenpox can be quite serious for those who first contract it as adults, and the new vaccine has been shown to be effective in shielding adults from the disease.

This development has important implications for hospitals, where the vaccine could be used to protect both employees and patients who are at risk, according to Dr. Gershon. Within three or four years, she says, the vaccine may be routinely administered to school age children. ■

## NEWSBRIEFS

### IN MEMORIAM

#### **RUSTIN MCINTOSH, M.D.**

*Dr. Rustin McIntosh*, director of the Pediatric Service of The Presbyterian Hospital, and Carpentier Professor and Chairman of the Department of Pediatrics at P&S from 1931 to 1960, died on February 14 at his home in Tyringham, Massachusetts. He was 91 years old.



Dr. McIntosh was an intern in medicine at The Presbyterian Hospital from 1920 to 1921, and an intern and resident at Babies Hospital from 1922 to 1923, before joining the staff of Babies Hospital as assistant attending physician and chief of clinic in 1923. His work took him to Johns Hopkins University and Hospital from 1927 until 1931 when he was named director of Babies Hospital (later to become a division

of The Presbyterian Hospital).

Dr. McIntosh was born in Omaha, Nebraska, and graduated from Harvard College and Medical School. He served in the U.S. Army Medical Corps in France during World War I, and received two army citations and the Croix de Guerre from the French government.

His wife, Millicent Carey McIntosh, who survives him, is president emerita of Barnard College.

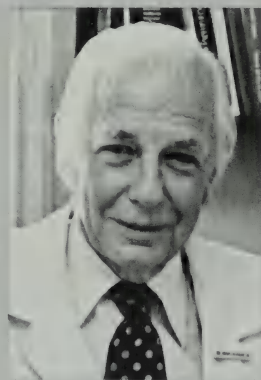
#### **ANN SULLIVAN**

*Ann Sullivan*, unit manager of Harkness Pavillion for 23 of her 30 years at The Presbyterian Hospital, died January 11. Dr. David Habif, a long-time friend of Mrs. Sullivan's, recalled that patients in Harkness were all treated "like family. Ann knew where everybody was, who they were—she looked after everybody and their families."

A memorial service was held on Feb. 21 in the Pauline A. Hartford Memorial Chapel.

#### **HENRY ARANOW, JR., M.D.**

*Henry Aranow, Jr., M.D.*, who was acting director of Presbyterian's Medical Service, and Samuel Lambert Professor Emeritus



and acting chairman of Medicine at P&S, died at The Presbyterian Hospital, on Feb. 9, at the age of 72.

Dr. Aranow, who was well known for his research in myasthenia gravis, taught at P&S from 1942 until 1978.

After graduating from Harvard College in 1934, Dr. Aranow studied medicine at P&S, completing his training at The Presbyterian Hospital and at Johns Hopkins.

Dr. Aranow was chairman of the board of the Mary Imogene Bassett Hospital in Cooperstown, NY, and a board member of the Helen Hayes Hospital in Haverstraw, NY. He also was associate editor of *Man and Medicine: The Journal of Ethics and Values in Medicine*.

#### **ANESTHESIOLOGY:**

*Gerald S. Weinberger, M.D.*, was elected president of the New York State Society of Anesthesiologists for the 1986 term.



#### **BIOSTATISTICS:** *Joseph L.*

*Flaiss, Ph.D.*, is the author of *The Design and Analysis of Clinical Experiments*, recently published by John Wiley & Sons.

#### **OBSTETRICS AND**

**GYNCOLOGY:** *Ralph M. Richart, M.D.*, was a faculty member for the January 3-4 symposium "Infection/Immunology in Obstetrics and Gynecology," presented by The New York Hospital-Cornell Medical Center.

#### **ORTHOPEDIC SURGERY:**

*David L. Andrews, M.D.*, has been appointed chief of the Trauma Service of the New York Orthopaedic

Hospital division of The Presbyterian Hospital. *Robert E. Carroll, M.D.*, has retired from his post as chief of the Hand Service. He was succeeded by *S. Ashby Grantham, M.D.* The Society of Practitioners of Columbia-Presbyterian Medical Center named *Frank Stinchfield, M.D.*, Practitioner of the



Year for 1985, at a dinner held in his honor on March 27. Dr. Stinchfield served as director of Orthopedic Surgery and as president of Presbyterian's Medical Board, and was the first orthopedic surgeon to hold the title of president of the American College of Surgeons.

**PEDIATRICS:** The Associates of Babies Hospital sponsored a public forum entitled "The Aids Epidemic: What It Means to You and Your Children" on March 3 at The Unitarian Church of All Souls on 80th Street at Lexington Ave. Participating in the



program were *Jane Pitt, M.D.*, *George Lazarus, M.D.*, and *Michael Katz, M.D.*, of Pediatrics, and *Glenda Garvey, M.D.*, of Medicine.

The 48th annual Babies Hospital Alumni meeting took place May 2. The day's activities included the Hattie Alexander Memorial Lecture, given by Dr. Saul Krugman, professor of pediatrics at New York University, on the topic of viral hepatitis.

A memorial service for the late Dr. Rustin McIntosh was held on that day in the Pauline A. Hartford Memorial Chapel.

**PSYCHIATRY:** Senator Mark O. Hatfield (R-Oregon) received the New York State Psychiatric Institute and Columbia University Department of Psychiatry annual Leonard Cammer Memorial Award for his outstanding efforts on behalf of mental health research.

**SURGERY:** *Frederick O. Bowman, Jr., M.D.* has



been appointed Fulbright Visiting Professor to take part in a teaching program in Portugal and Egypt, part of the 58th international circuit course to be conducted by the American College of Cardiology. *Keith Reemtsma, M.D.*, director of the surgery service at Presbyterian and Valentine Mott and Johnson & Johnson professor and chairman of surgery at P&S, delivered the University Lecture at Columbia on February 10. Dr. Reemtsma's lecture was entitled "Spare Parts Surgery: Organ Replacement from Man and Machines."

## CPMC to Establish Clinical Research Center in Dentistry

The Presbyterian Hospital and Columbia University will establish a Center for Clinical Research in Dentistry at Columbia-Presbyterian Medical Center.

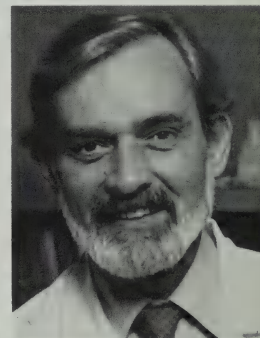
According to an article by *Irwin D. Mandel, D.D.S.*, in the November 1985 issue of NYS Dental Journal, the Center will provide state-of-the-art equipment needed by researchers to accelerate the progress they have already made in dental research; an independent facility in which research patients would be studied; investigative teams prepared to apply new laboratory techniques to solving clinical problems and developing new approaches to the prevention of oral disease; a trained clinical and statistical support staff; a locus for training activities for hygienists and dentists, and for recent graduates who are interested in academic careers and seek advanced clinical training as well as research training.

Research activities in the Center will focus on preventing dental caries by augmenting natural protective mechanisms; development of dentally improved foods such as low cariogenic snack foods and low retentive foods for the elderly; the impact of nutrition and topical supplements on periodontal disease; antibacterial therapies in caries and periodontal disease; diagnostic use of salivary chemistry and analysis of gingival crevicular fluid; development and testing of new therapeutic agents to combat dental pain; and development and evaluation of new filling materials, implant devices and techniques.

The Center also will be involved indirectly in studies of oral cancer, geriatrics and growth and development problems, by providing both physical and technical resources.

## Radiation Oncology Department Created at Medical Center

Columbia-Presbyterian Medical Center's role as one of New York's two comprehensive cancer centers will be strengthened significantly through the creation of its first new clinical department and service in 34 years—Radiation Oncology.



The new department is under the direction of *James D. Cox, M.D.*, former chairman of the Department of Radiation Oncology at the Milwaukee Medical Center and the Veterans Administration Hospital in Milwaukee. Dr. Cox has been named the first director of the Radiation Oncology Service at The Presbyterian Hospital as well as the first chairman of Radiation Oncology at the Columbia University College of Physicians and Surgeons.

Dr. Cox also has been named deputy director of the Comprehensive Cancer Center at CPMC, which was officially designated by the National Cancer Institute in 1979.

Dr. Cox is the principal investigator in three major national studies of patients

with inoperable carcinoma of the lung, bladder, and upper respiratory and digestive tracts. Preliminary reports of his study of the largest series of inoperable cancer in the lung (there are 50,000 new cases each year in this category) have been promising.

"Although I am chairman of a new department of radiation oncology at Columbia-Presbyterian Medical Center, I am inheriting some of the most important radiologic research programs in my field, spanning a period of over 70 years," said Dr. Cox.

"What excites me about coming to this medical center is the potential to quickly translate its strong research programs into meaningful advances for cancer patients," he added. "Beyond that, I hope to take advantage of the active cross-fertilization going on between departments here to help build upon our accomplishments as one of the most productive and prestigious comprehensive cancer centers in the nation."

In addition to working to improve long-term survival of patients with inoperable cancer, Dr. Cox has been investigating more effective methods of irradiating cancers. For example, it has been found that long-term survival sometimes will be enhanced if apparently uninvolved tissue near a tumor is treated, although this effect is not fully understood.

Although radiation dosages have been studied for nearly 75 years, radiation oncologists today, with the aid of computers, are able to study combinations of intensity and timing more closely, and for the first time are able to obtain early indications of the onset of serious side effects.

Dr. Cox added, "We are about to test more promis-

ing drugs with fewer side effects. These, we hope, will benefit patients with inoperable tumors. Since the early studies of tumor sensitizers, we also have found drugs which we believe will make radiation therapy and chemotherapy more deadly to tumors. In fact, some drugs that have been used for many years as chemotherapy agents now are known to make radiation therapy more effective."

"Dr. Cox is one of the most highly respected physicians working in the field of oncology in general and radiation oncology in particular," said PH president Thomas Q. Morris, M.D. "He is a valued addition to our staff and is expected to build upon the already notable accomplishments in the field."

"The field of radiation oncology holds great promise for the treatment of cancer," Dr. Morris added. "I believe that the contribution of Dr. Cox and his new department to cancer therapy over the next decade and beyond will be noteworthy."

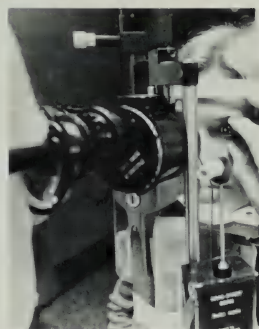
### **Presbyterian Opens Day Surgery Center For Ophthalmology Patients**

The Presbyterian Hospital has opened a DaySurgery Center at the Edward S. Harkness Eye Institute. It is the only ambulatory eye surgery facility in the area located in an institute which is devoted solely to disorders of the eye and which is part of an academic medical center.

The Center is under the direction of Drs. Anthony Donn and B. Dobli Srinivasan.

Currently, the center is only performing operations requiring local anesthesia such as cataract surgery, biopsies, reconstruction of eyelids, vitrectomies, retinal

re-attachments and similar procedures. Full ophthalmic and ophthalmologic nursing



support is provided by Medical Center personnel.

"Patients get all of the care of an inpatient unit, but they can go home a few hours after surgery and, soon after, resume their daily routines," says Dora Dungca, R.N., director of Medical Nursing.

### **Patient Education is an Important Aspect of Ambulatory Surgery**

"While the emphasis is on patient care, patient education is very important here. The nurse gives the patient special instructions regarding care of the eye at home. Because such activities as lifting heavy objects and bending are restricted after eye surgery, the nurse reinforces these instructions and also provides emotional support for the patient."

Dr. Srinivasan says: "In recent years there has been a revolution in the management of eye surgery patients which not only makes ambulatory surgery feasible, but also advisable.

"Technologic advances, in particular the development of ophthalmic lasers, have made many common surgical procedures far easier on patients. Furthermore, our understanding of the healing process has improved and we know that some patients, especially some older patients,

recuperate faster at home."

"The advantages of ambulatory eye surgery are obvious," says Dr. Donn, "but surgery can be accompanied by complications. Our center offers patients the assurance that, should they be needed, the resources of a major medical center are available to them, as well.

### **Epidemiologist Heads International Relief Effort**

Sam Toussei, Ph.D., assistant clinical professor of Public Health in the Epidemiology Division of the Columbia School of Public Health, has been named president of International Medical Relief (IMR).

Founded in 1984 in England, IMR is the first Anglo-American relief organization dedicated to providing non-political humanitarian aid, including health and medical services, in areas unserved by established agencies because of politics, war or harsh conditions.

### **PH Trustees Elect New Board Member**

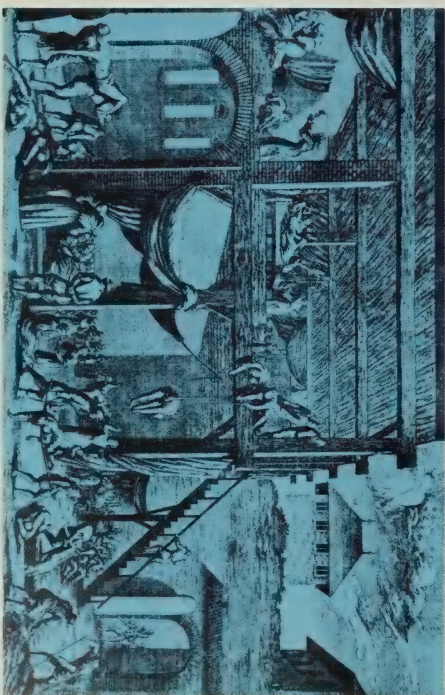
Mr. James Bickford Hurlock was named a member of The Presbyterian Hospital's Board of Trustees on April 16. Mr. Hurlock is a partner in the law firm of White & Case in New York. He serves as a director of SeaCo Inc., Sea Containers Limited, and Altex Resources Ltd., and is a trustee of the Western Reserve Academy and of American Friends of Magdalen College Ltd.

Mr. Hurlock is a graduate of Princeton University and of Oxford University, which he attended as a Rhodes Scholar. He received his law degree from the Harvard Law School.

"The Trustees and I take great pleasure in welcoming Mr. Hurlock to the Board," said Presbyterian Hospital President Thomas Q. Morris, M.D.



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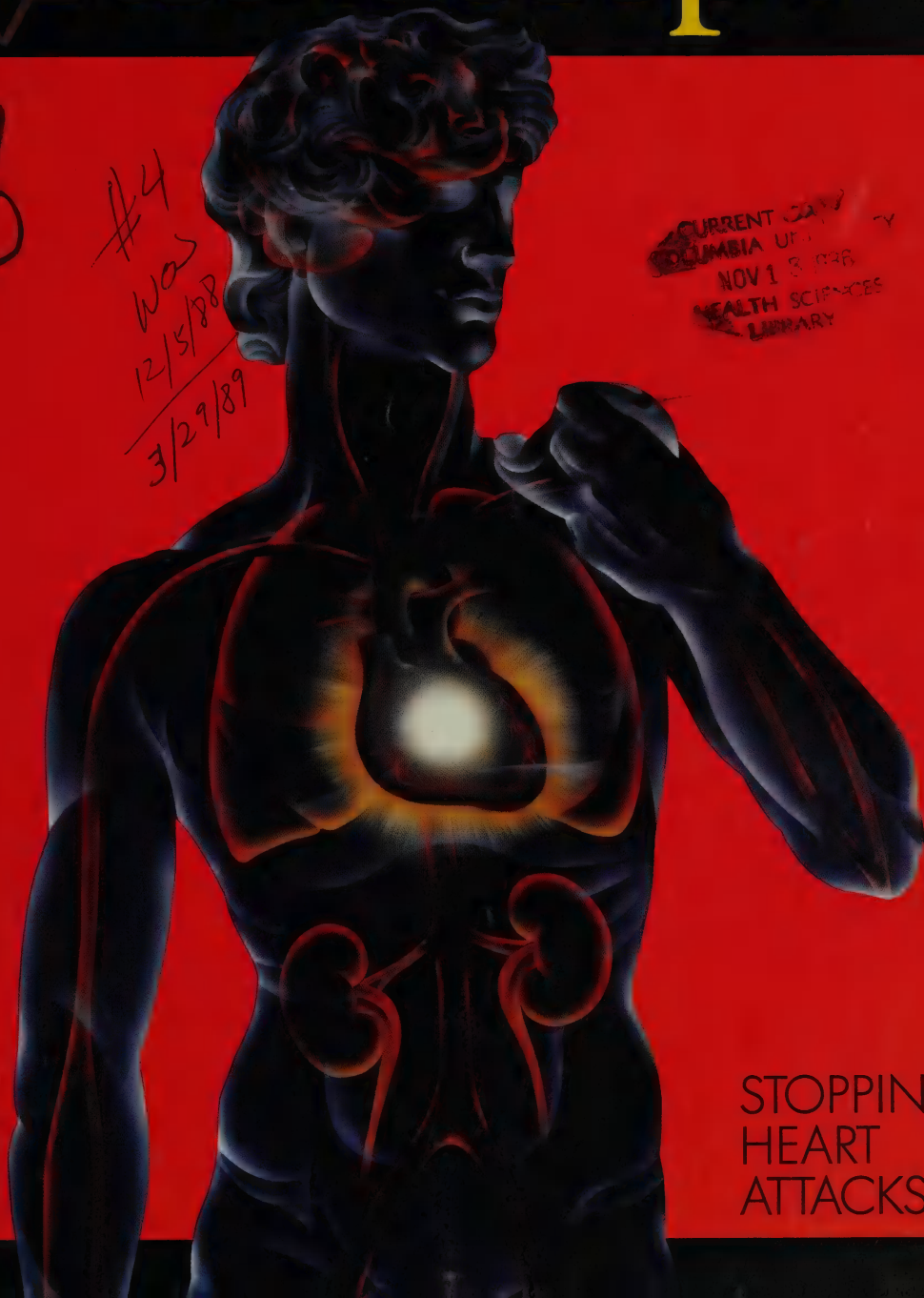
*Interior of a plague hospital, 17th Century*

# Stethoscope

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# Stethoscope

VOLUME XII, NO. 3

A publication of  
The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
Thomas Q. Morris, M.D., President

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Published by  
Public Interest Department  
Richard P. Zucker, Director  
The Presbyterian Hospital  
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New York, NY 10032-3784  
(212) 305-5911

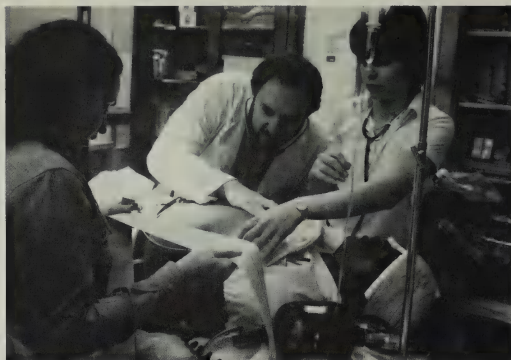
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To Our Readers**

You are invited to participate in The Presbyterian Hospital's Planned Giving Program. By making a gift of an annuity, unitrust life insurance or personal property, you can provide income for yourself (and, if desired, your beneficiary) and obtain both immediate and long-term tax benefits. With your participation in the Pooled Income Fund or through the more traditional gift of a bequest, you can have the assurance that the Hospital will be able to meet the challenges of tomorrow. Friends wishing to name The Presbyterian Hospital as beneficiary in their wills should consult their attorneys.

For further information, call or write the Director of Planned Giving, CPMC Fund, Inc., 100 Haven Ave., New York NY 10032, (212) 781-2100.

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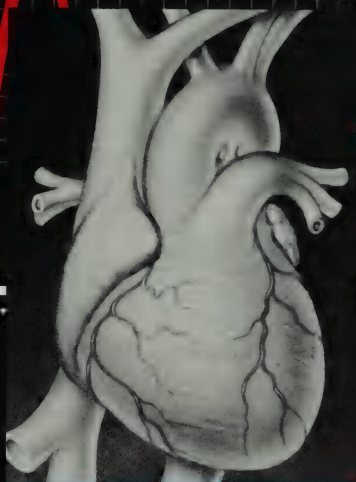
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The last decade or so has seen remarkable progress in heart disease treatment. Heart transplants, perhaps the most celebrated advance, have become virtually "routine."

Though dramatic and important, heart transplants help relatively few. Most heart disease patients benefit from day-to-day application of less well publicized advances—many developed at Columbia-Presbyterian Medical Center. A partial list would include pacemakers, defibrillators and surgery for patients with irregular heart rhythms; balloon angioplasty and valvulo-

plasty for patients with clogged blood vessels and blocked heart valves; and drugs for patients who overdose on the common heart medication, digitalis.

Fortunately, current research holds the promise for even more advances. For example, researchers here are evaluating a medication called tissue plasminogen activator that, in conjunction with angioplasty, may dramatically reduce the damage caused by heart attack.

Technology isn't everything, however, when it comes to heart

disease. Prevention has great importance. Researchers have revealed numerous factors that increase the risk of heart disease. Thus, individuals—as well as employers, through company screening programs—can play a major role in stopping America's number one killer.

In this issue, we examine some recent advances in heart disease treatment and prevention, as well as some basic and clinical research programs at the Medical Center that promise to put even more therapies at the disposal of health professionals around the world.

*"...A major public health experiment is underway in the U.S. that could help doctors decrease damage from heart attacks."*

*—Eric Powers, M.D.*

# ATTACKING HEART ATTACKS

*Imagine if heart attacks could be stopped.*

*Only a few years ago, this would have been a naive thought. Now, if you ask the nation's leading cardiologists for their opinions, they'll probably tell you that heart attacks can be stopped—before they cause permanent and extensive damage or death.*

*The reason for this change in attitude is a change in technology—a new drug that has exceeded all expectations of safety and efficacy in stopping heart attacks in progress. The drug is TPA, or tissue plasminogen activator.*

*Heart attack, or myocardial infarction, is the technical term for death of heart muscle, which occurs when the blood supply to the heart is cut off. The resulting oxygen and*



**"If the results of this study are as encouraging as the previous ones, there will be a revolution in the treatment of patients with heart attacks in this country over the next five years."**  
—Dr. Powers

nutrient deprivation eventually leads to tissue death.

The underlying cause of heart attack generally is atherosclerosis. Atherosclerosis is the deposition of fatty plaques on the inner walls of the arteries (see p. 12). The disease is aggravated by many factors, including smoking, cholesterol intake and genetic disposition.

At a given point, plaque buildup obstructs the coronary arteries enough to cause a characteristic pain—angina. With or without angina, if a blood clot completely blocks the artery, a heart attack occurs.

### **TPA Dissolves Clots, Preventing Further Damage**

"TPA can dissolve these small clots and restore blood flow to the heart muscle in a matter of minutes or hours," says Eric Powers, M.D., assistant attending physician in the Cardiology Division of Presbyterian's Medical Service, who is coordinating TPA research at Columbia-Presbyterian Medical Center (CPMC). CPMC is part of a nationwide program, sponsored by the National Heart, Lung and Blood Institute (NHLBI) at the National Institutes of Health (NIH), to evaluate the effectiveness of treatments using TPA.

"Previously, we tested a number of different agents, particularly a drug called streptokinase," continues Dr. Powers, who also is assistant professor of clinical medicine at the Columbia University College of Physicians & Surgeons (P&S). "It turned out that TPA is twice as effective as streptokinase in dissolving blood clots." Consequently, NHLBI took the unusual step of discontinuing this comparative study of the two drugs, replacing it with a second study now under way.

"Streptokinase is an enzyme that dissolves clots throughout the body, but can relatively easily cause bleeding," says Dr. Powers. "TPA, on the other hand, has relatively little effect in the blood stream until it reaches a clot, where it activates a substance called plasminogen. Plasminogen becomes plasmin, a substance that dissolves clotting proteins in the clot, and the clot is dissolved."

According to Dr. Powers, TPA may be safer than streptokinase for two reasons. First, it is less likely to cause bleeding. Second, as a natural substance produced by the body,

TPA is less likely than streptokinase to cause an allergic reaction.

### **Keeping the Blood Flowing**

In the TPA study now under way, researchers are using the drug to dissolve coronary artery blood clots and then testing whether angioplasty can eliminate obstructions at the sites where the clots had lodged.

Angioplasty, a relatively simple and safe technique, increasingly is being used in place of simple coronary bypass surgery at major medical centers. It involves insertion of a catheter, tipped with an uninflated balloon, into a vein near the groin and up into the obstruction in the coronary artery, where the balloon is inflated.

In most cases, the catheter can pass by the obstruction through the opening made by the TPA. Once the balloon is inflated, blood flow is significantly increased through the artery. This makes it unlikely that another small clot would cause a second heart attack at that site.

### **Not a Cure for Heart Disease**

"As important as this new technology may be, we are not talking about a cure for heart disease," cautions Dr. Powers. "Obviously, if there are obstructions further along the artery or in other arteries that cannot be widened, the patient will continue to be at risk. If the patient is predisposed to atherosclerosis, especially if he continues to smoke, drink and eat fatty, high-cholesterol foods, it will be only a matter of time before he ends up in trouble again."

"However, if the patient has limited, well-defined obstructions in the artery that we can clear, we think that the combination of TPA and angioplasty may have a very positive impact on long-term survival. That's precisely what we're trying to find out through this second study."

Dr. Powers concludes, "If the results of this study are as encouraging as the previous ones, there will be a revolution in the treatment of patients with heart attacks in this country over the next five years. Our expectation is that, at least among the heart disease patients who are brought to a major treatment center such as ours, death or disability from heart attacks will be substantially reduced." ■

## TIME IS CRITICAL

Some patients, with or without previous heart damage, die suddenly when a coronary artery is completely blocked. But cardiologists now know that most heart attacks cause tissue death over a period of hours—up to as many as six or seven. The sooner the patient arrives at a hospital for treatment, the more likely that permanent damage will be minimized.

In future studies, Dr. Powers and other researchers hope to determine how and where TPA should be administered. For example, some cardiologists already believe that

paramedics will be permitted to administer TPA to heart attack victims on the street, at home or wherever they are found.

Dr. Powers cautions that the risks of doing this may outweigh the benefits. The 15 minutes or less that it takes an ambulance to bring a patient to the hospital may not be significant, he reasons, and the risk, however slight, of inducing bleeding in a patient who should not be treated with TPA, may not be worth taking.

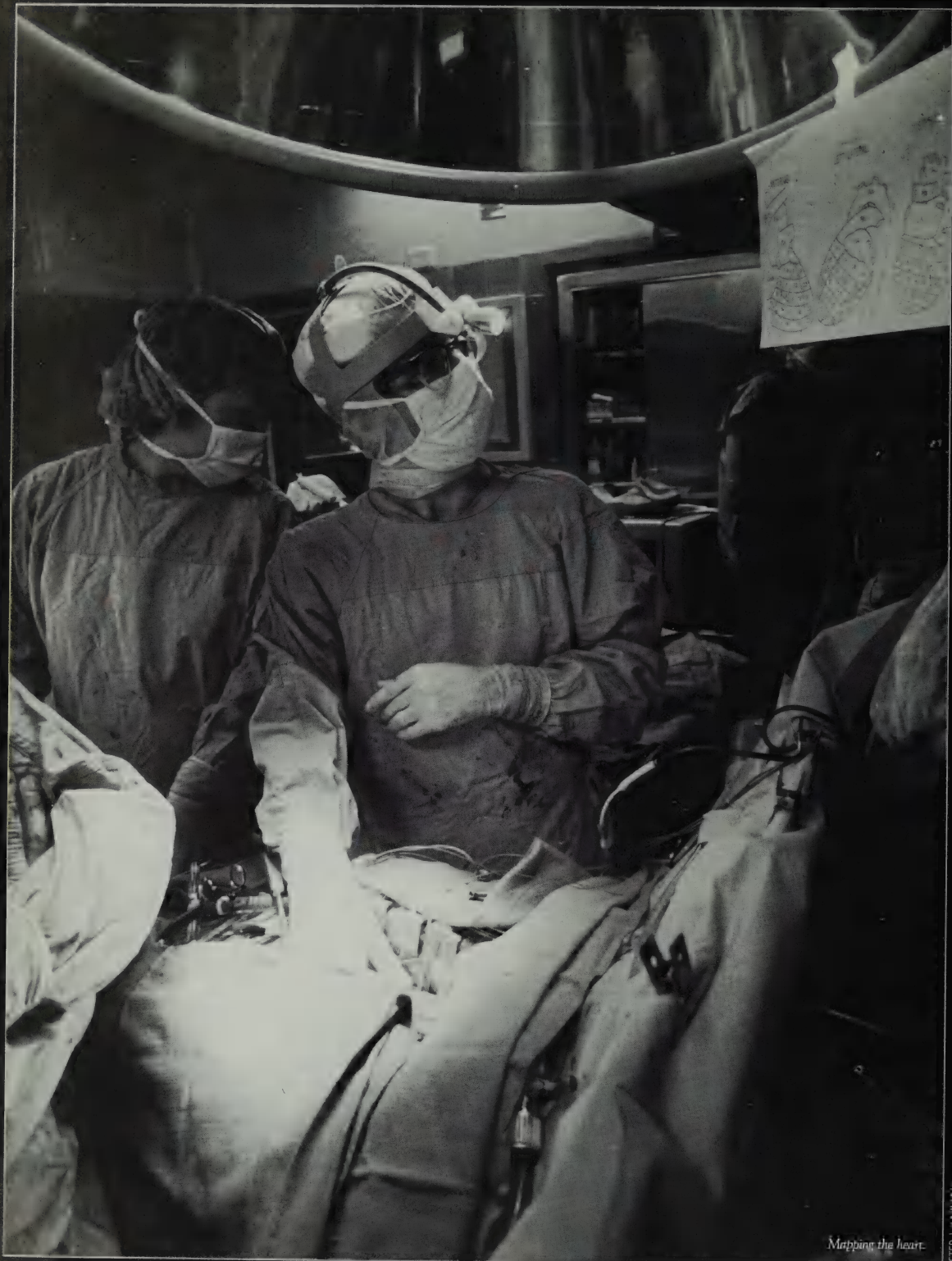
### **Buying Time for Heart Attack Victims**

According to Dr. Powers, other factors may help cardiologists decrease the damage from heart attacks. The most promising of these

are drugs that lower the amount of oxygen and nutrients the heart needs and that help the heart tolerate the insult for a longer period of time before permanent damage results.

"Some people have suggested that we immediately use angioplasty to treat every patient who comes into the emergency room with a heart attack and not ever bother with TPA. This would be feasible but difficult," he said. "We hope to learn who will benefit from TPA alone, who needs angioplasty immediately, who can wait a day or two, and who should receive drugs to slow down the heart muscle. We hope to answer these questions in the not-too-distant future." ■





*Mapping the heart.*

# SUDDEN CARDIAC

# DEATH

## WHEN THE HEART SHORT CIRCUITS

**E**very year sudden cardiac death kills approximately 450,000 Americans, but most people don't even know what it is.

Although sudden cardiac death is commonly confused with heart attack, it is not the same thing. Heart attack occurs when a clot blocks a coronary artery already narrowed by heart disease. But the blood-starved heart muscle takes time to die, perhaps several hours.

By contrast, sudden cardiac death is, as the name says, sudden. It is the result of an electrical "accident" in which the heart's electrical system becomes so disorganized that the heart beats wildly and erratically and can't pump blood. Some of these erratic heart rhythms, known as arrhythmias, can be lethal.

Another difference between the two heart disorders is that while heart attack usually occurs without warning, sudden cardiac death usually follows other signs of heart trouble, including heart attack and impaired pumping chambers. ►

## At the Forefront of Arrhythmia Treatment

"Sudden cardiac death has been an area of major interest here for years," says Dr. J. Thomas Bigger, Jr., director of the Cardiology Division at The Presbyterian Hospital, and professor of medicine and pharmacology at the Columbia University College of Physicians and Surgeons (P&S).

"Our Arrhythmia Control Unit is one of the most sophisticated such centers anywhere and has always been at the forefront of efforts to identify patients at risk for sudden cardiac death, and to study and manage arrhythmias that lead to sudden cardiac death."

"We have been very interested in finding out which people are most likely to fall prey to sudden cardiac death," says Dr. James Reiffel, associate director of the Arrhythmia Control Unit. "There are many different kinds of arrhythmias. Some of them are benign. But others are absolutely lethal, and it's important to know which is which."

Recent work done here has helped identify people with repetitive ventricular arrhythmias—in particular ventricular tachycardia resulting from heart attack—as being at greatest risk for sudden cardiac death. "We now know," says Dr. Reiffel, "that many of these people will suffer sudden

cardiac death within a year of their heart attacks unless we intervene."

## Drug Therapy New Shows Promise

"Although drug therapy for controlling potentially lethal arrhythmias has been around for years," says Dr. Bigger, "until recently, the results have been unpredictable, and a limited number of drugs were available. Some drugs didn't adequately suppress the arrhythmias they were intended to treat; others had side effects that made their widespread use inadvisable. Promising new drugs would appear and be tried out on small groups of patients here and there."

But then came CAPS (Cardiac Arrhythmias Pilot Study). Initiated by the National Heart, Lung and Blood Institute in 1984, CAPS is the first standardized effort to determine the best therapy for post-heart attack arrhythmias by comparing the efficacy of various drug strategies and evaluating their safety. CPMC is one of ten centers nationwide participating in this study; Dr. Bigger has headed the Medical Center's effort. According to Dr. Reiffel, if the study yields a drug regimen acceptable for a large-scale trial, such a trial will commence in 1987. The results from CAPS should be available this Fall.

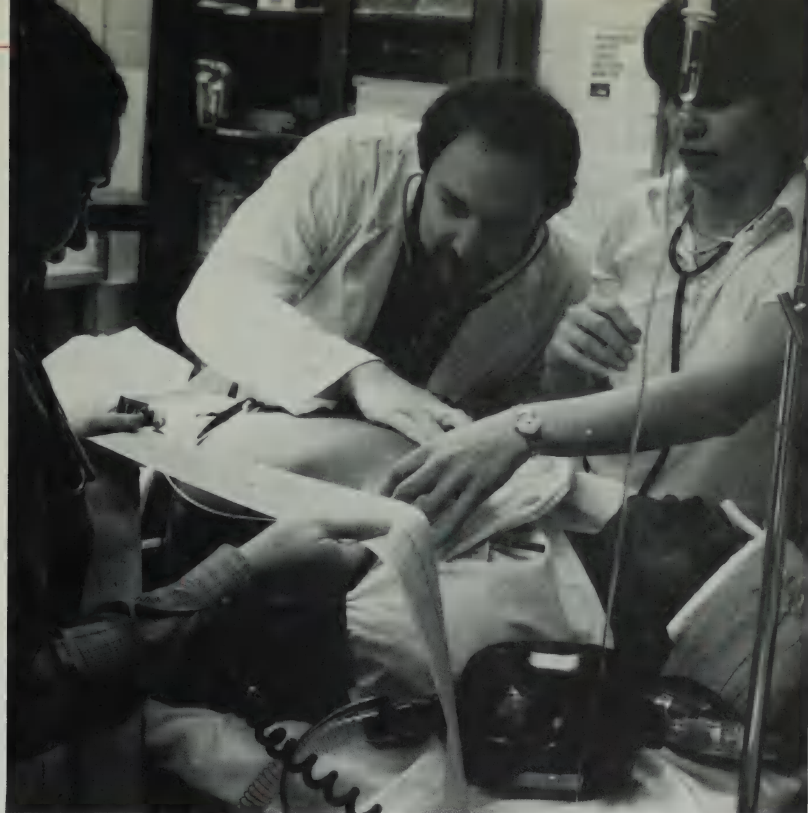
## Tailoring Therapy to the Patient

An important part of the work of the Arrhythmia Control Unit is determining the efficacy of antiarrhythmic drugs. "It's not enough to give a patient a drug and then wait to see if he does or does not have another ventricular episode," says Dr. Reiffel. "We need to put the drug to the test without endangering the patient."

A large part of this drug testing at CPMC is done in the electrophysiology laboratory. Dr. Reiffel explains, "In a controlled setting, we try to induce the patient's arrhythmia. If we are unable to do so, we know that the drug he is receiving is effective. Our safety record here is excellent."

Currently, another government-funded study aimed at combatting arrhythmias is underway and, again, CPMC is a participating center. This study, called ESVEM (Electrophysiology Studies Versus Electrographic Monitoring), aims to determine whether more accurate information regarding the effectiveness of antiarrhythmic drugs comes from electrophysiologic studies or from non-invasive studies in which patients are medicated, put through a series of exercise tests and monitored for an extended period. Because sudden cardiac death is such a health problem,





the most desirable prevention method would be a safe, effective and easily administered drug regimen. For this reason, much effort nationwide is being expended toward drug research.

Says Dr. Reiffel, "Promising new drugs are becoming available all the time. A recently introduced drug, called amiodarone, appears to be very promising. Furthermore, we are learning that a number of drugs are safer and more effective when used in combination than individually."

### **Alternatives to Drug Therapy**

Drug therapy is not the only approach being actively pursued in the war against sudden cardiac death. For patients whose arrhythmias do not respond to drugs, other options are available.

Surgery is one of these. The Presbyterian Hospital was among the pioneers in arrhythmia surgery, a technique now being used in a growing number of medical centers. In this type of surgery, the surgeon physically removes—or inactivates by freezing—the area of heart tissue that is the source of the aberrant electrical signal. Says Dr. Henry Spotnitz, associate attending surgeon at Pres-

byterian and associate professor of surgery at P&S, "Cutting away the trouble spot isn't really the great challenge. The challenge is to pinpoint its exact location."

Consequently, arrhythmia surgery entails extensive heart mapping, both before and during surgery. To map the heart during the operation, Dr. Spotnitz wears a special glove with an electrode probe on each of the four fingertips. The glove, which was developed at CPMC, permits quicker intraoperative mapping of cardiac electrical activity than do conventional single-probe techniques. This decreases the risk to the patient while providing more information about cardiac events.

A team of cardiologists, led by Dr. Reiffel and Dr. Jerry Gliklich, assistant attending physician on the Medical Service and assistant professor of clinical medicine at P&S, works in the operating room with the surgical team, helping them to construct the heart map and guiding them to the exact spot to be surgically removed.

From the point of view of technology and staffing, arrhythmia surgery is among the most dramatic and sophisticated performed here or any-

where. Happily, it produces dramatic results—patients free from life-threatening arrhythmias. "It removes the source of the problem. It's that simple," says Dr. Spotnitz.

Just recently, another promising therapy for arrhythmias that don't respond to drugs has appeared on the scene—the implantable defibrillator. This device, implanted in the patient's chest, detects the onset of dangerous arrhythmias and automatically administers a small shock to restore the heart's normal rhythm.

According to Dr. Bigger, these defibrillators already have produced good results. Future improvements, which would reduce their size and allow them to be implanted without opening the chest, should make them applicable on a broader scale and add a significant weapon to the anti-arrhythmia arsenal.

"We're working on every front to reduce the terrible toll that sudden cardiac death takes every year," says Dr. Bigger. "We have better detection methods, better drugs and better drug-testing mechanisms. We have effective surgical techniques and new technologies. We're making progress; it's an exciting time." ■

# Pacemaker Service Keeps Pace With New Technology

**F**ather Henrik Misiak of the Bronx knew something was wrong when he began to experience extreme fatigue while walking, especially when climbing stairs. "I noticed that my pulse was very slow," he recalls, "even with great physical effort."

His symptoms grew progressively worse. "After a very short walk I had to rest," he says. That prompted him to see his physician, who immediately referred him to Dr. Stanley J. Schneller, cardiologist, assistant attending physician, and coordinator of the Columbia-Presbyterian Medical Center Pacemaker Program of the Clinical Electrophysiology and Pacemaker Laboratory on Presbyterian's Medical Service.

"It was clear that Father Misiak required a permanent cardiac pacemaker," says Dr. Schneller, who also is assistant professor of clinical medi-



cine at the Columbia University College of Physicians and Surgeons. "His symptoms were due to bradycardia, or slowing of the heart rhythm. A dual-chamber pacemaker was implanted and Father Misiak's symptoms promptly disappeared."

## Hundreds of Thousands Benefit from Advances

Some ½ million people in the U.S. alone now are enjoying the benefits of cardiac pacing. Developments in pacemaker technology in the past four to five years have resulted in better-than-ever treatment of cardiac rhythm disorders.

Since 1959, when the first permanent transvenous pacemaker was implanted in a patient in Sweden (who is still alive), "permanent cardiac pacing has saved countless lives

and improved the quality of life for many others," says Dr. Schneller.

Used to treat patients with abnormal heart rhythms, pacemakers function by returning the physiology of cardiac contraction to normal. There are two types of pacemakers. The single chamber pacemaker, which sends an electrical impulse to the ventricle, provides the heart with a regular and constant rate of contraction.

Earlier this decade, researchers developed a more sophisticated pacemaker that paces both the atrium and the ventricle. Importantly, it senses the contraction of the atrium, then —after an appropriate interval— stimulates the ventricle to contract. This pacemaker also is "rate responsive"—in other words, it can speed its pace when the heart beats faster during exercise. Thus, the dual chamber pacemaker more closely mimics the physiology of a healthy heart than the single chamber device.

Says Dr. Schneller, "The dual chamber pacemaker results in better cardiac output and performance, higher exercise tolerance, and improved overall well-being for the majority of pacemaker patients."

The latest arrhythmia treatment techniques are employed in the new Clinical Electrophysiology and Pacemaker Laboratory, a cooperative program between the medical and surgical services, which has brought together experts in cardiac pacing with surgeons and electrophysiologists.

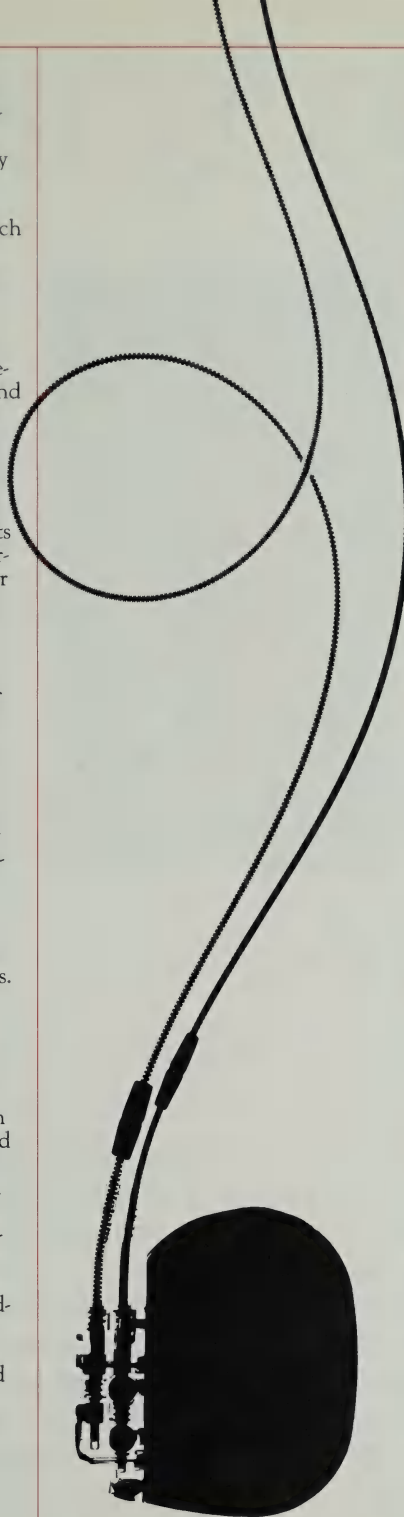
### **Open-Heart Surgery Not Required**

A pacemaker consists of two elements—a pulse generator (which is implanted under the skin, usually in the pectoral region of the chest), and an insulated wire, or "lead," which conducts the electrical impulse from the pulse generator to the heart.

Importantly, pacemaker implantation does not require open heart surgery. Instead, pacemakers can be implanted transvenously—by threading wire leads along veins into the heart.

The pulse generator, a disc-shaped device about the size of a pocket cigarette lighter, is implanted under local anesthesia with the assistance of a nurse and a technician. The generator consists of a power source—a lithium battery—and a microchip computer.

After the doctor makes a small



incision in the patient's upper chest, the wire or lead is fed into a vein and passed through the central blood vessels into the right side of the heart, where prongs on the end of the lead grab hold of the heart's internal wall.

The lead of a single chamber pacemaker is implanted only in the right ventricle. The dual chamber pacemaker has two leads, one implanted in the ventricle, the other, in the atrium.

Before implanting the leads, the team takes exact measurements to find the precise location in the atrium and ventricle at which pacing and sensing capabilities will be the most effective.

Under some circumstances, if a patient is undergoing open heart surgery in the operating room, the surgeon may elect to implant a pacemaker at the same time. In this case, the leads are attached to the outside of the heart wall and the pulse generator lies in the patient's abdominal wall.

In either case, doctors can adjust the pacemaker's program without further surgery by transmitting radiofrequency signals through the skin to the pulse generator. Says Dr. Schneller, "The multi-programmability of today's pacemakers permits fine tuning of the pacemaker's function to fit the specific needs of the patient."

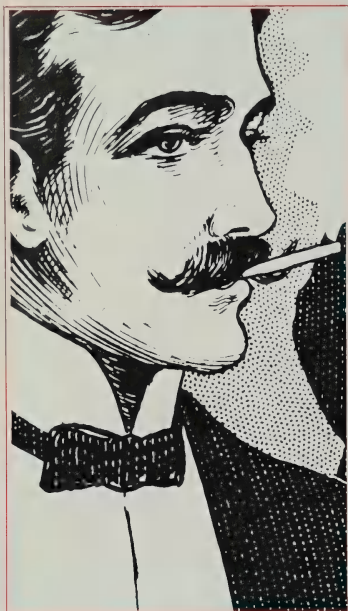
### **"I Felt Better Instantly . . ."**

Father Misiak remembers the procedure clearly. "I was conscious the whole time," he says. He was hospitalized for four days, but "felt better almost instantly, as soon as Dr. Schneller implanted the pacemaker." That was last November. "By January," he adds, "I could walk over two miles, which I now do every day."

Today's pacemaker not only lasts longer than older models, but has much greater reliability.

Currently, pacemakers are used mainly to treat patients like Father Misiak with bradycardias. According to Dr. Schneller, research in the pacemaker laboratory now is focusing on treating tachycardias—disabling and potentially fatal heart rhythm disorders in which the heart contracts in sudden irregular bursts of speed. Though most tachycardia patients respond well to medication, those who don't may benefit from the next generation of cardiac pacemakers. ■

# KEEPING "SCOR" ON



☐ YES  
☒ NO

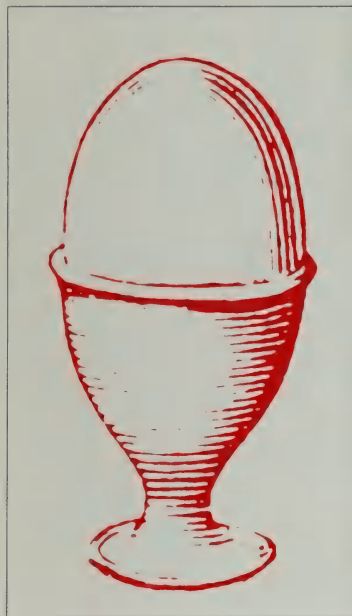
☒ YES  
☐ NO

☒ YES  
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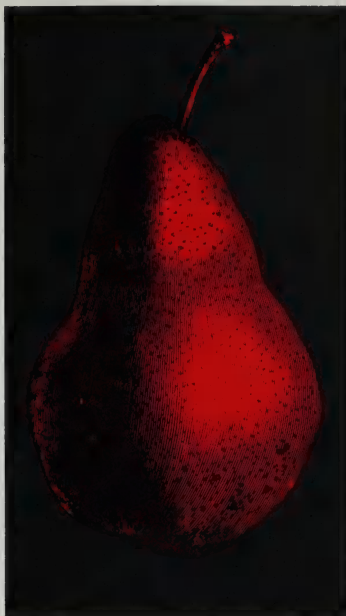
Heart disease, far and away the leading cause of death in the U.S., claims nearly one million lives every year. Most of these deaths can be traced to what is popularly known as "hardening of the arteries," or atherosclerosis.

"In order to understand heart disease, you have to understand atherosclerosis," says Dr. DeWitt Goodman, attending physician on Presbyterian's Medical Service and Tilden-Wegen-Bieler Professor of Preventative Medicine at the Columbia University College of Physicians and Surgeons (P&S). "Atherosclerosis is actually a disease process, not a disease itself," he explains. It begins as "fatty streaks," deposits of cholesterol and other fatty

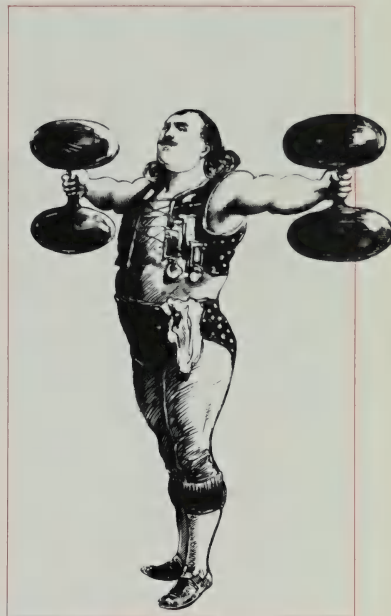
# ATHEROSCLEROSIS



☐ YES  
☒ NO



☒ YES  
☐ NO



☒ YES  
☐ NO

substances which attach to the inner walls of arteries. Over time, the fatty streaks may disappear or progress into plaques that obstruct blood flow and lessen the arteries' elasticity.

The most important consequence of atherosclerosis is coronary artery disease, in which too little blood reaches the heart. This can cause the vise-like pain of angina, or even heart attack, if blood-starved heart muscle begins to die. A heart attack usually results from a clot that forms on an atherosclerotic plaque, blocking the blood supply to part of the heart muscle.

Atherosclerosis also can lead to stroke (when it affects the carotid arteries), arrhythmias, kidney failure and intermittent

**"There is good evidence that measures that lower cholesterol can retard or reverse atherosclerosis, and can definitely reduce the risk of heart disease."**

claudication (in which minimal exercise, even walking, causes leg muscle pain and cramping).

**Signs of Potential Trouble Appear in the Young**

Most people, even children, have fatty streaks within their arteries, says Dr. Goodman. But not all people develop significant plaques. Researchers are not exactly sure why this is so, but they have identified a number of factors that increase the risk of developing atherosclerosis. In general, hardening of the arteries affects more men than women and increases with age. But the major risk factors include high blood pressure, cigarette smoking and elevated blood cholesterol levels.

Some additional risk factors for atherosclerosis include a sedentary lifestyle, diabetes, type A personality, obesity, family history of the disease and (in women) menopause.

**'Good' and 'Bad' Cholesterol**

Atherosclerosis is closely associated with cholesterol, a large fatty molecule transported in the blood by lipoproteins. But there are "good" and "bad" forms of cholesterol.

According to Dr. Goodman, most cholesterol in the blood is carried in low-density lipoproteins (LDL). "High levels of LDL are bad in that they raise the risk of atherosclerosis and thus raise the risk of heart disease," he says. "High-density lipoproteins (HDL), by contrast, carry less cholesterol and have the opposite effect on heart disease." Clearly, it is better to have a higher ratio of HDL to LDL cholesterol. Your total cholesterol level is the combination of the two types.

Dr. Goodman stresses that "everybody should have their cholesterol levels measured." This requires only a simple blood test. "If the cholesterol levels are high, then various lipoprotein levels can be measured. If it becomes necessary to look more closely at the arteries, more advanced diagnostic techniques, such as arteriography, ultrasound and magnetic resonance imaging, can

give direct information about atherosclerotic development."

Since atherosclerosis may not produce symptoms until its advanced stages, it is important to keep tabs on your cholesterol level. "The first clinical symptom may be a catastrophic event, such as heart attack or stroke, or even sudden death," says Dr. Goodman. Therefore, the best bet is to find out if you are at increased risk and, if so, to take preventive measures.

**Intervention Can Reduce Risks**

"There is good evidence that measures that lower cholesterol can retard or reverse atherosclerosis, and can definitely reduce the risk of heart disease," Dr. Goodman says.

"Safe" cholesterol levels vary with age, body weight and sex, but in general, someone in his 20s with a level above 200 would be considered at moderate risk for heart disease, as would someone in his 30s with a level above 220, or someone in his 40s with a level above 240.

Says Dr. Goodman, people at moderate risk should eat diets low in saturated fat and cholesterol and moderately low in total fat. "Avoid butter fat and fatty meat," he recommends. "Eat fewer eggs and less meat. Instead, eat fish and chicken."

People with elevated cholesterol levels should try to eliminate any other risk factors. For instance, they should avoid smoking, maintain an ideal body weight, keep their blood pressure under control and exercise. People with even higher cholesterol levels, who may need to take medication if they don't respond to dietary changes, need to be even more attentive to eliminating basic risk factors.

**Specialized Center of Research**

Atherosclerosis is the focus of a major research program at the Medical Center called SCOR-A (Specialized Center of Research in Atherosclerosis), one of only eight such programs funded by the

National Heart, Lung and Blood Institute of the National Institutes of Health. These programs include a wide range of clinical, metabolic and basic laboratory research on various aspects of hyperlipidemia (elevated levels of cholesterol or triglycerides in the blood), atherosclerosis and coronary heart disease.

CPMC's ten-year-old SCOR, headed by Dr. Goodman, is studying cholesterol production by the body, cholesterol-lowering drugs and lipoprotein metabolism, among other subjects.

The SCOR also includes a hyperlipidemia clinic that specializes in the treatment of individuals with lipid disorders who have a family history of these disorders. Dr. Henry Ginsburg, associate attending physician on Presbyterian's Medical Service and associate professor of medicine at P&S, is director of the clinic, which aims to detect lipid problems as early as possible and initiate preventive measures—first using dietary therapy and, if necessary, drugs. The clinic is following some 300 patients.

SCOR researchers are now examining a new drug called mevinolin, which lowers cholesterol levels by blocking a critical enzyme in the cholesterol synthesis process.

**Setting the 'Gold Standard' for Cholesterol Treatment**

In a newly created National Cholesterol Education Program, a consortium of 22 private and government organizations is working to improve the detection, evaluation and treatment of cholesterol-related disorders.

The program includes three expert panels, the most prominent of which will develop detailed guidelines and procedures for physicians and other health professionals. According to Dr. Goodman, who is heading this panel, they will set the "gold standard" for treatment. Dr. Ginsburg also is a member of this panel.

In addition, the program aims to educate the public about the dangers and treatment of high blood cholesterol. ■

# HYPERTENSION IN THE WORKPLACE

A close-up photograph of a hand gripping a thick, frayed rope. The rope is brown and shows significant wear, with many strands exposed. The hand is positioned in the lower center of the frame, with fingers wrapped around the rope. The background is a clear, bright blue sky. The overall image conveys a sense of tension and struggle.

When a disease and its related complications cost a country more than \$50 billion annually, there's cause for alarm. When the problem prompts a loss of 52 million worker-days of production each year, its control becomes a corporate responsibility.

Hypertension control programs in the workplace are clearly in the employer's best interest: They are tremendously cost-effective when compared to the price of hospitalization; they increase productivity by keeping employees

healthy; and, most important, they can prevent the disabling results of untreated high blood pressure. "If only a few strokes, a few myocardial infarctions are prevented, then a workplace program is well worth it,"

says Dr. Leslie Baer, a hypertension specialist and associate attending physician on Presbyterian's Medical Service, and associate professor of medicine at Columbia University's College of Physicians and Surgeons. ►



**"...52 million worker-days of production are lost annually to the consequences of hypertension..."**

## Pay Now or Pay Later

To illustrate the importance of screening programs, Dr. Baer cites an example of "Mr. Smith," who is unaware he is hypertensive and who has no blood pressure program where he works. He goes to the emergency room one night, complaining of numbness. He has had a stroke.

During a two-week hospital stay, Mr. Smith has continuous anticoagulation treatment, EEG's, angiograms and a barrage of costly procedures. His bill exceeds \$18,000.

"Ironically, Mr. Smith's insurance carrier contractually must provide that coverage, but makes no effort at systematic prevention," Dr. Baer says. "Because of the way premiums are structured for a preponderance of procedure-oriented reimbursement, hypertension prevention programs in particular have not developed—even though logic says they should have a long time ago.

"We want to construct defenses against needless hospitalization. And we have sound evidence this is possible—even though it isn't always an easy job."

Dr. Baer helped pioneer worksite hypertension plans during the mid-seventies, beginning with a blood pressure control program at The New York State Psychiatric Institute. The results of his pilot studies at five sites in New York State and data from other research form the model for corporate hypertension programs

throughout the U.S., including a plan used by General Motors and, most recently, a program for employees of Rockland County, N.Y.

There's no doubt, Dr. Baer says, that controlling hypertension is the employer's concern. For example, a 1982 study at General Motors found that each hourly employee averaged \$1,500 in health care and disability claims. Fifteen percent of those payouts were related to cardiovascular disease (CVD). Employee health care expenses for that year added \$480 to the production cost of each new vehicle. In another instance, in 1981, Citibank disbursed \$1 million toward treatment of CVD among its employees.

All told, the National High Blood Pressure Education Program (NHBPEP) estimates that 52 million worker-days of production are lost annually to the consequences of hypertension—stroke, heart disease and renal dysfunction.

## What Makes a Hypertension Prevention Program Work?

Dr. Baer attributes much of the success of his pilot programs to cooperative administrations and labor unions. The projects received financial backing via federal and state grants and the state health department. Dr. Baer also had the assistance of what he calls a "top notch, dedicated health care and

## OVERALL EFFECTIVENESS OF BP CONTROL PROCEDURES, AT FOUR INDUSTRIAL SITES\*

	UAW Members	Sanitation Workers	Postal Workers	Auto Workers	TOTAL
Number of clients referred to physicians for high BP	120	138	106	169	533
Average duration of follow-up period	19 mos.	17 mos.	13 mos.	6 mos.	---
Percent of referred clients who saw their physicians	92%	91%	93%	79%	88%
Percent of successful referrals who began treatment for hypertension	94%	93%	92%	81%	90%
Percent of clients under treatment showing success or progress toward success	87%	81%	83%	76%	82%

\*Andrea Foote, PhD, and John Erfurt, "A Model System for High Blood Pressure Control in the Work Setting," *High Blood Pressure Control in the Work Setting: Issues, Models, Resources*, (West Point, PA: MSD Health Information Systems; National High Blood Pressure Education Program; Citizens for the Treatment of High Blood Pressure, Inc. 1976), p. 43.

research team.

"You need cooperation," Dr. Baer says. "Especially in management and in the unions. Without the support of at least one of these groups, you're as good as swimming in the Atlantic Ocean without a life preserver."

Of course, he adds, before implementing a hypertension prevention program, a company must be sure it is needed and wanted. Thorough, systematic screening is the only way to find out if employees have a high blood pressure problem. The company must be willing to make it economically attractive for those who participate, and must assure workers that a positive diagnosis for hypertension will not threaten job security.

Any in-house blood pressure control plan is worth the time and expense only if employees use the service, and use it successfully, Dr. Baer says. This requires diligence both by the patient and by those operating the program. "You can almost look at it as a life-long commitment," he says. "Some people take the attitude: 'After I'm treated, I'll be fine and I'll stop my medication.' You have to hold down that drop-out rate if you're going to improve the overall health of a group."

And finally, treatment resources must be identified. Is there a facility readily available? Is there an in-house medical professional who can perform screenings and chart control, or must external help be recruited?

Dr. Baer acknowledges the difficulty of establishing an effective hypertension control plan. "But if you can get this mixture of people and resources," he says, "you can provide a unique service—especially in view of the number of people who are hypertensive." (Twenty-one percent of those screened in his studies were shown to have a reading above 140/90, now considered the point at which blood pressure begins to present a risk. Thirty percent of the people in that group were unaware they had high blood pressure.)

Dr. Baer says that once a control program is begun, it is bound to improve the health of the workforce; a hypertensive patient is much more likely to continue a regimen if facilities are readily accessible and if he or she can use them during work time. It also encourages a patient to keep up with a program when he sees co-workers doing the same.



## CPMC AND HYPERTENSION: GOOD HEALTH BEGINS AT HOME

In a medical center such as CPMC, most hypertensive employees are aware they have the condition. It would be difficult to escape knowing it, says Robert Lewy, M.D., director of the Employee Health Service of The Presbyterian Hospital.

Every employee has his or her pressure checked at his pre-employment physical examination and again at annual health reviews.

Dr. Lewy, who is an assistant attending physician on the Medical Service at Presbyterian and assistant clinical professor of medicine at P&S, says that employees average four visits per year to the health clinic, and generally have their blood pressure checked at those times.

In addition, the Employee Health Service keeps the work force attuned to the importance of preventive

health measures, in particular, the benefits of treating high blood pressure. The Service, in observation of National High Blood Pressure Month each May, offers free lunch hour blood pressure screenings for a week. Last year, more than 600 employees took advantage of the screening, and several new cases of hypertension were diagnosed. New cases are referred to the Employee Health Service or to private physicians for follow-up treatment.

"And of course," says Dr. Lewy, "if employees have questions or would like to have their blood pressure checked, they should feel free to call us at the Health Service. It's important to the Hospital as an employer, and to the employees, that high blood pressure be treated, and that people become aware of the dangers of neglecting hypertension." ■

## Uncertain Future for Such Ventures

Although Dr. Baer cannot say enough about the virtues of workplace hypertension treatment, he is cautious about predicting the future of such ventures. The reasons: insurance premium structures, the lack of third party funding for preventive health plans and the need to maintain high quality

medical care in these programs.

Federal grant resources have dwindled nationwide, prohibiting the groundwork needed for many programs. And until insurance companies begin to cover preventive approaches to health care, rather than waiting to pay for costly treatment of major complications of disease, "these programs are in danger," he says. ■

## Presbyterian Hospital Doctors Perform New Heart Procedure: Valvuloplasty

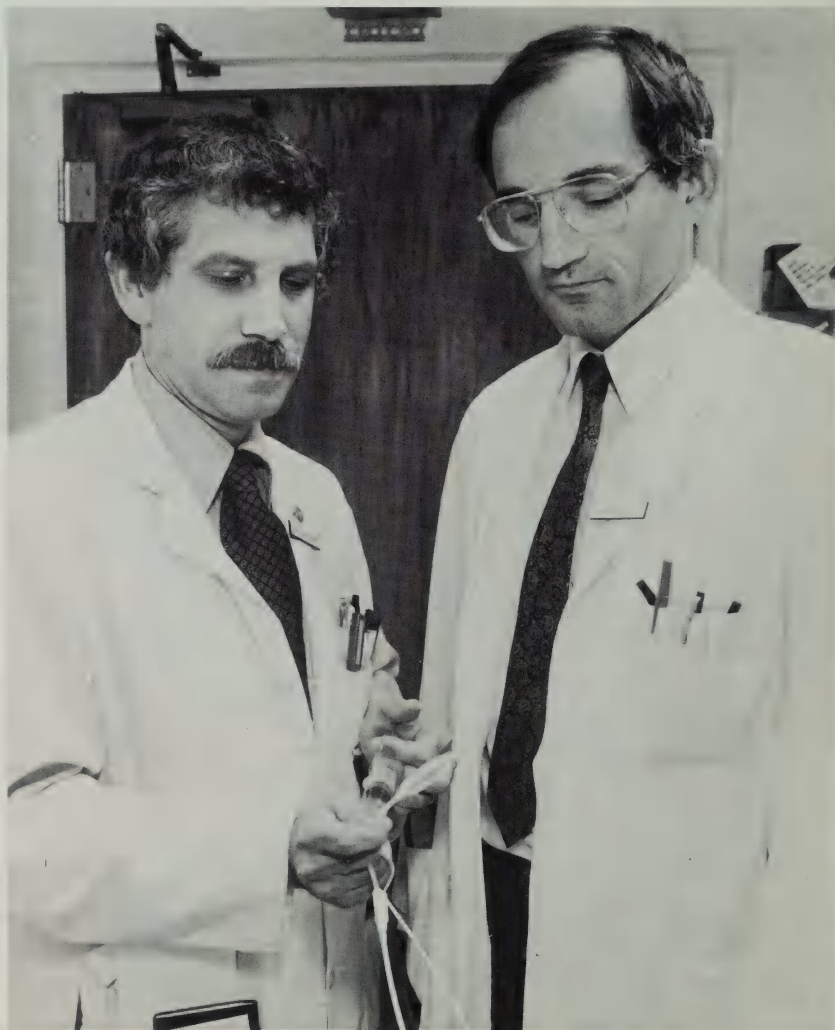
Doctors at The Presbyterian Hospital are using a new non-surgical procedure to repair blocked heart valves.

This procedure is now being used in a small number of patients too sick to undergo heart surgery. It is hoped, however, that it eventually will be used more widely.

The new procedure, balloon valvuloplasty of the mitral and aortic valves, can be performed in a matter of hours, and requires only two days of recovery in the hospital, saving patients both time and money. Heart valve replacement requires open heart surgery and approximately ten days of hospital recovery.

Balloon valvuloplasty opens blocked valves in the heart, allowing blood to flow normally through the heart. Doctors perform balloon valvuloplasty by guiding a balloon-tipped catheter through a major blood vessel up to and through blocked heart valves. The balloon then is inflated, opening the obstruction.

The heart's valves assure that blood flows in the proper direction. Blood coming from the lungs to the heart passes through



*Drs. Allan Hordof (left) and Eric Powers display special catheter for heart valvuloplasty procedure.*

the mitral valve. Blood is pumped out of the heart to the arteries via the aortic valve.

Rheumatic fever can cause obstructions in the mitral and aortic valves. Likewise, aging and congenital heart disease can result in aortic valve blockages.

Previously, balloon catheters had been used on blockages in the pulmonary valve in adults and children. Only recently, doctors performed valvuloplasty on the aortic valves of children.

Heart valve replacement has been performed on patients with obstructed heart valves since the late 1970's. The procedure consists of substituting a pig valve or mechanical valve for the patient's faulty one. Doctors at The Presbyterian Hospital have performed more than 1,700 heart valve replacements since 1965.

Dr. Eric Powers, cardiologist and director of the Adult Cardiovascular Laboratory at The Presbyterian Hospital, says that many patients who previously would have been candidates for valve replacement can now be treated with valvuloplasty. He cautions however, that the procedure is not appropriate for all patients.

The Presbyterian Hospital is the only hospital in New York City and one of only five in the country performing the procedure. ■

### **Valvuloplasty Repairs Narrow Aortic Heart Valves in Children**

Pediatricians at The Presbyterian Hospital have begun treating stenotic (narrow) aortic heart valves in children using special balloon-tipped cardiac catheters. Formerly, in pediatric cases, only pulmonary heart valves could be reopened using this technique, called balloon valvuloplasty. In this procedure, a catheter is inserted into a chest vein and threaded into

the heart. The balloon then is inflated with a salt solution, forcing the valve open.

According to Dr. Welton Gersony, director of the Division of Pediatric Cardiology in the Babies Hospital Unit of The Presbyterian Hospital, only a handful of medical centers now treat pediatric cases of aortic valve stenosis with balloon valvuloplasty. ■

### **FDA Approves First Antidote for Digitalis Overdose**

An antidote for countering overdoses of some forms of the commonly prescribed heart medication, digitalis, has been approved by the Food and Drug Administration. The new drug, called Digibind, is expected to meet an immediate life-saving need for some 10,000 to 20,000 patients each year who experience severe and often irreversible digoxin and digitoxin intoxication. It also will help the 1,000 or so children who accidentally ingest these medications each year.

Basic research on Digibind was conducted by Dr. Vincent P. Butler, attending physician at the Medical Service and professor of medicine at P&S, who has had an important role in nearly every significant improvement in digitalis therapy.

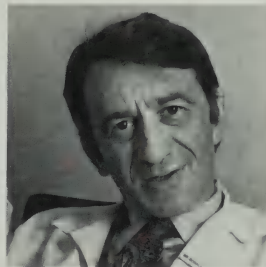
The new drug, manufactured and developed by the Burroughs Wellcome Company, is the first "biological" product that is a specific antidote to a drug. Digibind is made of purified fragments of digoxin-specific antibodies—proteins that have the ability to bind to a substance (an antigen) and render it inactive. ■

### **PH Implements Behavioral Medicine Program**

In recent years research has indicated that behavioral factors play a significant role in major health problems in

the United States. Indeed, for heart disease, by far the leading cause of death and disability in the industrialized world today, some of the primary risk factors—smoking, poor eating habits, and stress—are behavioral.

In response to this, in September, the Hospital is inaugurating its new Behavioral Medicine Program in the Psychiatry Service. Under the direction of



Donald Kornfeld, M.D., attending psychiatrist at Presbyterian and associate dean at P&S, the program offers services in diet and weight control, smoking cessation, stress management for coronary prone behavior, biofeedback, and relaxation therapy. Patients are treated in group or individual therapy sessions. In each of the programs, behavioral and cognitive methods are used to promote behavior change.

In setting up the new program, the first concern was to meet the needs of the medical staff at Columbia-Presbyterian Medical Center. "A survey we conducted in the Department of Medicine indicated that smoking cessation, weight control and the other services we are offering were the ones most in demand," says Dr. Kornfeld. "Now CPMC physicians will be able to say to their patients, not just, 'You should stop smoking,' but, 'You should stop smoking and we have a program here that can help you do it.' That's an important difference."

Dr. Kornfeld also points out that the advent of the

Behavioral Medicine Program is timely in respect to the DRG system that became effective in January of 1986. "With a general reduction in the length of hospital stay, it is important to have ambulatory services that reduce risk and enhance recuperation in patients recovering from illness or surgery," he says.

In light of this need and of the increasing popularity of medical programs in which the patient is encouraged to assume considerable responsibility for his or her care, the Behavioral Medicine Program is an appropriate complement to treatment.

The program is located in the newly constructed PH 16 Center and the Hospital's 61st Street facility. For more information, call 305-9985. ■

### **ADMINISTRATION:**

David L. Ginsberg, executive vice president for Planning and Program Development, spoke in April at the Greater N.Y. Hospital Association annual meeting in Queens on "Responding to a Changing Health Care Environment."



Dr. Thomas Q. Morris, president of The Presbyterian Hospital, has been named chairperson of a Greater New York Hospital Association/International Symposium of New York State Task Force on Quality Assurance.

**DERMATOLOGY:** Nurse clinician Jeanette E. Anders, R.N., spoke at the 4th International Symposium on Psoriasis in July at Stanford University. Her speech was entitled "Estab-

lishing an Ambulatory Psoriasis Treatment Center: Defining the Nursing Role."

The Rhoda Benham Award of the Medical Mycological Society of the Americas was presented in March to *Dr. Margarita Silva-Hutner* for "outstanding and sustained contributions" to the field. Dr. Silva-Hutner, mycologist on the Dermatology Service and a consultant to the Clinical Microbiology Laboratory, founded the first laboratory in the U.S. exclusively devoted to the study of fungi pathogenic to humans.

*John S. Strauss, M.D.*, director of the Department of Dermatology at the University of Iowa, delivered the Carl Truman Nelson Memorial Lecture on April 2. His talk was entitled "Basic Science and Clinical Aspects of Retinoid Therapy in Acne Vulgaris."

**NEUROLOGY:** *Dr. Darryl C. DeVivo*, Sidney Carter Professor of Neurology at P&S and director of pediatric neurology at Presbyterian, was invited lecturer to the Belgium Pediatric Neurology Society and Visiting Professor at the Catholic University of Louvain, May 15-17.

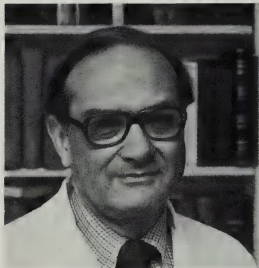


*Dr. Stanley Fahn*, attending neurologist and Merritt Professor of Neurology at P&S, was named the 1986 Robert Wartenberg Memorial Lecturer for clinical research in neurology by the American Academy of Neurology.

At the same meeting, *Dr. Joseph Herbert*, assistant

professor of neurology at P&S and assistant neurologist at Presbyterian, received the J. Weir Mitchell Award of the American Academy of Neurology for the best research paper by a neurologist under the age of 35. The award was presented at the Academy's annual meeting, held in April in New Orleans. Dr. Herbert received the award while serving as Muscular Dystrophy Association Fellow in Neurology.

*Dr. Robert E. Lovelace*, attending neurologist and director of the Neuromuscular Clinic at Presbyterian and professor of neurology at P&S, presented a talk on "Varieties of the Peroneal Muscular Atrophy Disorder" at a meeting of the National Foundation for Peroneal Muscular Atrophy, which was held in May at the Neurological Institute.



*Dr. Lewis P. Rowland*, director of the Neurology Service and Moses Professor and Chairman of Neurology at P&S, has been appointed to the National Advisory Neurological and Communicative Disorders and Stroke Council of the National Institute of Neurological and Communicative Disorders and Stroke.

**NURSING:** *Dora Dungca*, R.N., director of the Medical Nursing Department, and *Mary Kreider*, R.N., nursing care clinician for inpatient and ambulatory surgery, co-authored an article entitled "Temporal Arteritis and Sudden Irre-

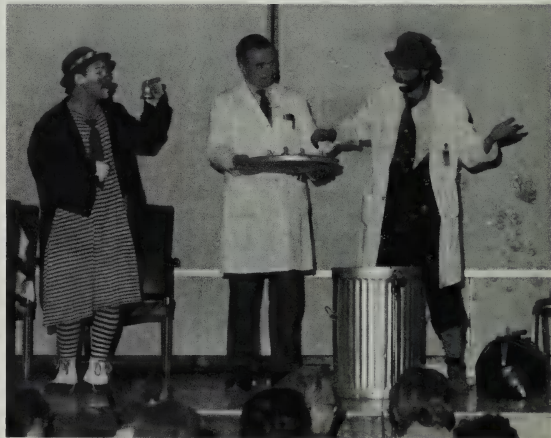
versible Vision Loss" which recently appeared in *Ophthalmic Nursing Forum*.

#### **ORTHOPEDIC SURGERY:**

*Dr. John Denton*, director of the Division of Pediatric Orthopedic Surgery at Presbyterian and associate clinical professor of orthopedic surgery at P&S was guest lecturer at the North Carolina State Medical Society meeting held in Asheville in May. His topic was "Growth Plate Injuries in Children."

*Dr. Charles S. Neer II*, attending orthopedic surgeon at Presbyterian and professor of clinical orthopedic surgery at P&S, was principal lecturer at the Royal Berkshire Shoulder Surgery course in Great Britain in May. He also served as a faculty member for a course entitled "Orthopedic Surgery: Elbow and Shoulder" in June at the University of Minnesota in Minneapolis.

**PEDIATRICS:** Babies Hospital's "Heart Day," held in May, reunited over 1,000 children who had had open heart surgery or had been treated for coronary disorders at the Hospital. The day's activities included performances by the Big Apple Circus and singer Carol Cass.



*Big Apple Circus at Heart Day.*

The eighth Stephanie Lynn Kossoff Memorial Lecture was presented in June at P&S by *Dr. Charles Cantor*, professor and chairman of the Department of Human Genetics and Development at P&S. His talk was entitled: "The Impact of Physical Maps of the Human Genome on Our Understanding of Inherited Diseases."

#### **PSYCHIATRY:** *Dr. Donald S. Komfeld*

, attending psychiatrist at Presbyterian and professor of clinical psychiatry and associate dean at P&S, participated in a National Institutes of Health Consensus Development Conference on the Integrated Approach to the Management of Pain. The conference, held in Bethesda, Md., was designed to provide physicians and consumers with information regarding the safety and effectiveness of drugs, devices and procedures.

*Dr. Herbert Pardes*, Lawrence Kolb Professor and Chairman of the Psychiatry Service at Presbyterian, has been elected vice president of the American Psychiatric Association for 1986-87. During Mental Health Month in May, Dr. Pardes, who also is director of the N.Y. State Psychiatric Institute, appeared on the



Dr. Pades and Phil Donahue.

Phil Donahue show as part of a special program devoted to the importance of dealing openly with mental disorders.

Dr. David Shaffer, attending psychiatrist at Presbyterian and professor of psychiatry and pediatrics at P&S, and his colleagues have been awarded four grants for the study of adolescent suicide. The projects include: a critical review of the literature on preventive intervention against adolescent suicide; evaluation of three New Jersey suicide prevention programs; development of a national directory of youth suicide prevention programs; and a study of whether the incidence of suicide attempts in the families of teenagers who commit suicide is due to genetic or environmental factors.

**PUBLIC INTEREST:** Nearly one hundred and fifty senior citizens participated in "graduation" ceremonies in May upon completion of a four-part health promotion program sponsored by The Presbyterian Hospital at local senior centers. For many of the

participants, it was the first graduation of any kind. The group was the first to graduate from the program, taught by health educator Socorro Rosado and covering topics including arthritis, diabetes, nutrition and hypertension. The classes are given in Spanish, Russian and English.

**RADIOLOGY:** A reception and portrait unveiling in



Dr. Seaman with David Baker, M.D., current chairman of Radiology.

honor of Dr. William Seaman, attending radiologist at Presbyterian, and special lecturer in the Department of Radiology at P&S, was held in May in the P&S Faculty Club. Dr. Seaman was director and chairman of radiology from 1956 to 1982.

#### **SPEECH AND HEARING:**

Dr. Thomas Fay, director of the Department of Speech and Hearing, has been appointed to the Subcommittee on Environmental Health of the Committee on Public Health of the New York Academy of Medicine. Dr. Fay, who also is professor of clinical audiology and speech pathology in the Department of Otolaryngology at P&S, was recently a speaker at a forum entitled "The Dangers of Noise and Ways to Quiet Your Community" at Lehman College.

#### **SURGERY:**

Dr. Kenneth A. Forde, attending surgeon at Presbyterian and professor of clinical surgery at P&S, has been elected president of the N.Y. Surgical Society.

John Kieman, director of the Organ Recovery Program, was principal speaker at a N.Y. State Public Health Association-Long Island Region meeting in May on "Organ Transplantation: A Challenge to the Conscience of the Bi-County Region."

Dr. James R. Malm, attending surgeon and professor of clinical surgery at P&S, was installed in April as president of the American

Santulli Pediatric Surgical Conference Room and Library. The conference room/library is located on the second floor of the Center for Women and Children.



Dr. Michael C. Stalneck, director of pediatric plastic surgery at Presbyterian and instructor in clinical surgery at P&S, was guest speaker at the Joint Section of Otolaryngology and Plastic Surgery and the Surgical Seminar on Trauma at the 91st Annual Scientific Medical Association on July 23. His lecture was entitled "Craniofacial Surgery and Trauma."

#### **UROLOGY:**

Dr. Terry W. Hensle, director of the Division of Pediatric Urology and associate professor of clinical urology at P&S, hosted the 1986 meeting of the Society for Pediatric Urology at the Alumni Auditorium in May. The meeting is an annual event involving pediatric urologists from around the world.

#### **In Memoriam:**

Dr. Leonidas A. Lantzounis, former attending orthopedic surgeon and clinical professor of orthopedic surgery at P&S, died in January. Dr. Lantzounis, who graduated from the National University of Greece in 1921, served as an intern and resident at Presbyterian, and was associated with the N.Y. Orthopaedic Dispensary and Hospital for almost four decades. He retired from the Medical Center in 1964.



The Presbyterian Hospital  
Columbia-Presbyterian Medical Center  
New York, New York 10032-3784



Medical students in 1870s studying "peculiarities of the masculine heart."





